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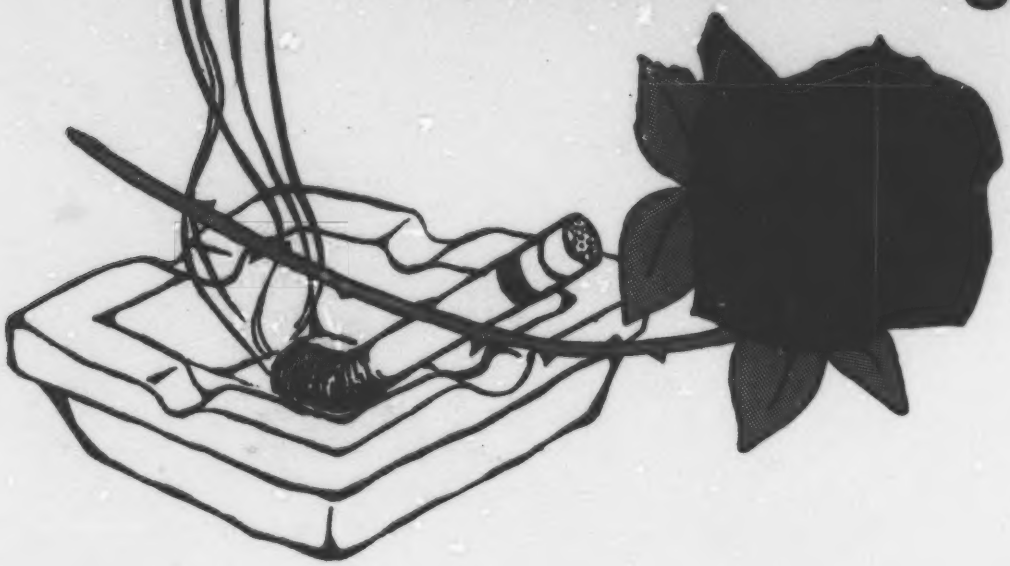
United States Department of State
Office of Medical Services

SMOKE-FREE

Low-Stress Smoking Cessation Program



Instructor's Guide

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SMOKE-FREE: LOW-STRESS SMOKING CESSATION PROGRAM

Instructor's Manual

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TOBACCO HAZARD EDUCATION

M/MED/TH United States Department of State 647-0133

Dear Volunteer Smoking Cessation Counselors:

Thank you for volunteering to help people on the road towards a lifetime of freedom from smoking!

The purpose of the enclosed packet is to train volunteers at each post to teach smoking cessation courses effectively and at low cost. The enclosed materials, along with this instruction guide will enable you to help people gain freedom from smoking by addressing stress, assertiveness, weight control and many other issues commonly confronted by people going through withdrawal from nicotine addiction.

The following is a course outline for an eight week support group. Appendix A contains price and ordering information on several films I suggest showing throughout the eight-weeks that are sure to enhance individual motivation in the program.

As you read through the materials be aware that this is only a suggested text for the course. I encourage you to add your own expertise whenever possible. Always remember, your enthusiasm, or lack of enthusiasm for this subject is sure to be reflected in your presentation and subsequently your success rate.

Feel free to contact me if you have any questions. I'd like to hear from all of you. Good luck!!

Sincerely,

Judith D. Berman

Judith D. Berman
Coordinator

CLASS ONE: OUTLINE

1. Orientation
   a. instructor introduction
   b. student introductions

2. Presentation of Course Outline
   a. types of interventions

CLASS ONE:

Orientation:

Begin the group by introducing yourself and giving relative background information. Be aware that the first thing the participants are going to ask you is if you have ever smoked. It has been shown that the most effective instructors are ex-smokers. Smokers often resent support given by someone that never went through what is often referred to as the "trauma" of withdrawal from cigarettes. Go around the room and have everyone introduce themselves, state how long they have smoked and talk about their past experiences (if any) with trying to gain freedom from smoking. It is important to ask everyone why they want to quit. If someone cannot come up with an "I" answer, a reason why they want to stop for themselves, then tell them that they should not be attempting to stop in this course at this time. If someone is there because their boss sent them or their wife threatened to leave them, not only will they be unsuccessful but they may be a burden to the rest of the class. Praise each individual when they present you with good reasons for wanting to gain freedom from smoking. Some positive reasons for stopping are health concerns, hates smelling bad, doesn't like the idea of something having control over them, taking up too much of their time. Some important, but not substantial reasons to stop smoking: Not socially acceptable, wife doesn't like it, etc... These are important reasons but are not sufficient alone to prevent the individual from resuming smoking. Be creative. Design handouts for the various topics, ie., A reason for quitting hand out, etc...

I often refer to smoking cessation as gaining freedom from smoking. The term "quitting" smoking implies that the person is giving something up, rather than gaining control over something negative in their lives.

Presentation of Course Outline:

Now that you have gotten to know each other better you may go on to present the course outline to the students. I have taught many different types of smoking cessation courses. When the idea of support groups for smokers began, the most common type of intervention involved meeting for several weeks and having the smokers gradually reduce the number of cigarettes they smoked. As it became apparent that the cigarettes smoked while doing this came to be seen by the smoker as a type of reward then the popularity of this method phased out. Another method that came to be was "nicotine reduction". Since reducing the number of cigarettes had proven to be inadequate, group leaders sought another method by which smokers could wean themselves gradually off both the psychological and physical aspects of their addiction. Almost every ex-smoker knew that there was a physical component to their habit long before the 1988 Surgeon General's report on the Addictive Properties of Nicotine was released.

I saw something very interesting when I began running groups using this "nicotine reduction" intervention. During the course of the week one the group was instructed to change to a brand of cigarettes lower in tar and nicotine than those they currently smoked. This first reduction was to be the largest. I noted that at the next meeting very few participants reported any signs of physical withdrawal at all. Over the next few weeks of reduction, down to the least amount of tar and nicotine available on the market, I really didn't notice much in the way of physical withdrawal in the group. (We will talk about the physical symptoms of nicotine withdrawal in class two.) The week finally came when the group was going to reduce their nicotine from a seemingly insignificant amount (a much lower reduction than that taken in week one) to zero. This was "quit week". What I saw within two days was a group of people in full blown nicotine withdrawal. Along with coping with the psychological aspects of quitting I was looking at a group of people struggling with the same physical withdrawal as those who quit "Cold Turkey". (Cold Turkey means <u>no</u> gradual

reduction, just smoke as usual until your target date and then stop completely.) Withdrawal lasted the usual two weeks in these participants and for most, the symptoms, which vary individually, were of the same intensity as those quitting Cold Turkey. The Surgeon General reported that there has not been a minimum level determined of the amount of tar and nicotine needed to feed an addiction or cause other harmful effects to the body. Since the group above, utilizing a "nicotine reduction" intervention, did not show any amelioration of their symptoms when smoking ceased, this indicated to me that the amount of nicotine needed to fully feed an addiction requiring two weeks of withdrawal is probably a very small quantity. This reason, above all others is what has led me to believe that a Cold Turkey program, where participants pick a target date to stop smoking, and in the interim do all they can to learn why they smoke, why they want to stop and practice coping strategies for dealing with the urges to smoke, is by far the most effective intervention available today in the smoking cessation field.

This program is a Cold Turkey one. It will be effective in leading participants along the road towards a lifetime of "Freedom from Smoking". Each participant will set class four as their target date for smoking cessation. Throughout the program we will talk about stress management during smoking cessation, weight control, assertiveness training (to deal with those smokers who are jealous of the participants remarkable accomplishment!), and positive self-talk. We will also see educational and motivational films and we will give and take a tremendous amount of support from each other for the task we are about to undertake.

There are some rare occasions where the individuals addiction is so strong both psychologically and physically, that he/she cannot contemplate going through the withdrawal on both levels, concurrently. I believe that most people can handle the two weeks of nicotine withdrawal on their own. In these few instances, however, if you have a consulting physician, then Nicorette gum (nicotine polacrilex) can be a valuable alternative to smoking. If you do have this resource available, then you may reassure your group that at any time during the nicotine withdrawal, if they are about to pick up a cigarette, you will provide them with a prescription for Nicorette gum instead. Encourage all participants to push through the two weeks on their own, with the help of the coping strategies learned in class, and use the gum only as a last resort. (See Appendix B for detailed information on the use of Nicorette Gum before prescribing this medication.)

NOTES

CLASS TWO: OUTLINE

1. Introduction
   a. reasons for smoking
   b. reasons not to smoke

2. Homework Assignment; Recording and Rating Sheet #1
   a. triggers to smoke
   b. the "habit" component of nicotine addiction

3. Film (optional)
   a. health benefits of smoking cessation

CLASS TWO:

Introduction:

Congratulate the class for taking the first step towards a longer, healthier, therefore happier, life. Addiction to cigarettes, unlike addiction to other chemicals has been reported by the Surgeon General as one of the hardest addictions to break. Unlike other chemicals where the addiction is primarily physical, the addiction to cigarettes has three major components. Along with the strong physical aspect, smokers addiction has both a psychological (triggered by classically conditioned urges, ie., with coffee, talking on telephone...) and a behavioral (habit) component. The actual physical withdrawal from cigarettes lasts at most two weeks where the psychological and behavioral component can last up to five years. Unless someone has had the education to go along with their withdrawal, many ex-smokers report that their desire to have a cigarette never disappears.

Many smoking cessation courses and support groups have a tendency to stress only the negative aspect of smoking. The group is often brainwashed into believing that smoking is something that they did not really enjoy. They never liked to smoke because it is so dangerous. It is important to go back in time to the participants first cigarette and point out that their first "drags" were not easy or pleasant, but something that they had to teach their body to enjoy. The thousands of irritants, carcinogens and other toxic chemicals found in cigarette smoke are not likely to be readily accepted by our bodies! In contrast to stressing the negative "feelings" about smoking, however, I understand that smoking a cigarette is a pleasant, enjoyable activity for many people. To try to convince them that it wasn't is not only dishonest but will not be effective in gaining their confidence in the group. Participants need honesty and directness when they seek support with one of the most difficult changes they will make in their lifetime.

I often relate the following story about a friend of mine who loves to play miniature golf. He plays with his own clubs even when the courses are closed in the winter. He loves to play miniature golf, however, as he claimed when we were discussing this particular aspect of smoking cessation, if someone told him it has been discovered that the sport causes lung cancer, respiratory disease, heart disease, and was harmful to those around him, he would find a new pastime. To try and convince him that he never like miniature golf in the first place would not only have been fruitless, but would greatly have lowered his confidence in me and my program. Okay, so everyone in the group loves to smoke, they find it relaxing, pleasurable, it gives them a lift, makes them happy. Accept this. Then, also accept that smoking is the number one cause of premature death in this country and find something else to do for enjoyment. To be successful as a non-smoker one does not need to deny the feelings of loss that accompany withdrawal. On the contrary. The acceptance of ones true feelings about smoking, along with a strong understanding of not only why they smoked but why they want to stop is what prevents ex-smokers from going back six months or a year later.

Homework Assignment; Recording and Rating Sheet #1:

The homework assignment that follows will be very important in this process of understanding individual smoking patterns. Beginning after group today all participants are to record every cigarette they smoke on a Recording and Rating Sheet with the following categories for smokers to key in to each time they take out a cigarette: (See Appendix C, Recording and Rating Sheet #1; you are free to xerox this form for your classes.). Cigarette #; Time; Need(1-5most); With whom; Where; Mood/Trigger.

This is a good time to introduce the concept of "triggers" with regards to smoking. Introduction to Psychology is a good place to start. We can begin to understand triggers with the help of Ivan Pavlov and his dogs, and the concept of classical conditioning. Pavlov was a psychologist who had several dogs. He noticed that when he presented his dogs with food that they would salivate, indicating hunger (food ,the unconditioned stimulus; salivating, the unconditioned response). After several weeks of observing this consistently Pavlov began to ring a bell (the conditioned stimulus) every time he presented the dogs with food. After several rounds of this he presented the dogs, when they were hungry, with the ringing of the bell alone. The bell had become a trigger for hunger and even when presented alone without the unconditioned stimulus (food) the dogs would salivate.

How does this relate to smoking? Many smokers have a very patterned habit. They only smoke in the presence of certain triggers. One woman in a group that I ran only smoked at her desk. She never smoked or had the urge to smoke anywhere else! Since the desk was such a strong trigger for her smoking habit I suggested that she use the next two weeks as an opportunity to quit smoking at her desk and to go somewhere else to smoke when the urge arises. This sort of suggestion has proven to be helpful in many cases where people fear failure in their attempts to gain freedom from smoking because of certain triggers that will be "impossible to avoid" therefore impossible not to smoke in the presence of. One trick for these people to use is just what the woman in the above case did. Prior to quit day (week 4) have the participant stop smoking only in places that they will find the most difficult not to smoke in. They can simply go somewhere else to smoke at this time and will thus have a chance to practice "unlearning" those particular triggers.

Spend the next ten minutes or so having class members identify their triggers for smoking. After a meal, after sex, with coffee, with alcohol, when bored, when stressed, when angry, while writing, while using computer, when on telephone, when driving, while waiting. Assure the class that over the course of the next five weeks you will be giving them alternative coping strategies, other things, that they will find useful to do instead of smoking when confronted with their triggers.

Finally, stress the importance of filling out the Recording and Rating Sheet every time a cigarette is smoked over the next week. (If they cannot commit to doing this, how are they going to commit to not smoking!) Aside from identifying triggers and patterns of smoking which are often surprising to the person and very helpful, the form helps to break the behavioral (habit) component of smoking addiction. Do you ever light a cigarette and then light another one forgetting about the first? These are the "habit" cigarettes. The unconscious cigarettes. When filling out the form their will be <u>no</u> unconscious cigarettes. Every cigarette will be noticed. Be sure to tell participants to smoke as usual over the next two weeks. They may find that they are reducing the number of cigarettes smoked because filling out the sheets is such a hassle. One of the reasons for quitting that I have encountered in many classes is, "The Recording and Rating sheet was such a pain I just stopped smoking!".

One way to impress upon people the strength of their habit is to have them calculate the number of inhalations they have taken from a cigarette. Have everyone do their own calculations and then go around the room and have them report their results to the class. Here's how we calculate: One pack of cigarettes = 20 cigarettes; each cigarette has 10 inhalations. Let's use as an example a person who has smoked a pack a day for 20 years. 20 years X 365 days/year = 7,300 days that they have smoked; One (1) pack a day X 7,300 days = 7,300 packs of cigarettes; 7,300 packs of cigarettes X 20 cigarettes per pack = 146,000 cigarettes smoked; 146,000 cigarettes smoked X 10 inhalations per cigarette = 1,460,000 times that the participant has raised his/her arm towards their mouth and inhaled a cigarette. Now, that's a habit!

Film:

At this point in the class you may show the recommended film "The Why Quit Quiz" (See Appendix A for recommended film listing and ordering information) If the film is not available then you may go over the film highlights with the class. These highlights involve the health benefits of stopping smoking. Some of them are as follows:

The life expectancy of someone who has never smoked is seven years longer than that of a smoker.

Smoking just one cigarette has the following health consequences; It increases the heart rate, increases blood pressure, and lowers skin temperature.

The most immediate benefit of smoking cessation is an immediate drop in the likelihood of suffering sudden death. There are also social, cosmetic and many other immediate health benefits.

In addition to increased oxygen flow and better circulation, coughing spells, chronic shortness of breath and red irritated eyes are some other health benefits that you incur shortly after stopping.

When a pregnant woman smokes she is more likely to have an unhealthy baby, delivery complications, a retarded child and is more likely to introduce toxins such as carbon monoxide and nicotine into the system of the developing fetus.

A pre-cancerous cell from the lung of a smoker who stops smoking will just disappear!

The cilia in the bronchi of the lungs of a chronic smoker are paralyzed, leaving the lungs open to disease agents. When a smoker stops smoking the cilia resume their normal function!

A one pack a day smoker is doing the same harm to their heart as someone who is fifty to seventy-five pounds overweight!

Remind the class about their homework assignment, the Recording and Rating Sheets, and answer questions.

NOTES

CLASS THREE: OUTLINE

1. Introduction of Buddy System

2. Discussion of Recording and Rating Sheet #1
   a. individual patterns of smoking

3. Stress Management
   a. introduction to the concept of "stress"
   b. deep breathing exercise

4. Homework Assignment; Recording and Rating Sheet #2

CLASS THREE:

Introduction of Buddy System:

We begin class three by having everyone choose a buddy. I usually find it is better for couples taking the class together to choose a buddy outside the couple. Sometimes the two weeks of nicotine withdrawal can be stressful and when two people live together they often find it helpful to turn to someone else for support during this time. It is a good idea for the participants to choose a buddy that works near them so that they can walk together at lunch and reach each other easily. When chosen, the buddies should call each other once before the next class, which is our quit date, just to get used to talking to each other on the phone. Each participant is to call their buddy at least one time, hence, each pair will speak twice before quit day!

Now is a good time to remind the class that they will be putting away their cigarettes the following week. Next week you will be getting together with the participants two times.
The transition from smoker to non-smoker is a very difficult one and the participants need a tremendous amount of support at this time. Please schedule two classes next week. The class immediately following quit day will be for support and at this time the group will learn a wonderful intervention to stress called "Progressive Relaxation Training", the second exercise on the enclosed tape. Later on in this class you will be introducing the participants to another intervention to stress; "Deep Breathing", the first exercise on the enclosed tape.

Discussion of Recording and Rating Sheet #1:

Have everyone take out the Recording and Rating sheets they did for homework. Be very strict about the importance of these sheets. If someone has not completed the homework assignment, stress the fact that it is largely these sheets that will prevent them from going back to smoking six months or a year later. Now, who wants to go through all this again! Let them know that they will have one more chance this week to get to know their own personal smoking pattern through these sheets. Also note that the Recording and Rating Sheets are the way that you will get to know their patterns, thus making you better able to help them individually throughout the process of withdrawal. Have each participant move to sit by their buddy. Now have each pair trade Recording and Rating Sheets. Give them fifteen minutes to go over and look for patterns in their buddies smoking.
Patterns to look for include: What time of day their buddy smokes the most (early morning smokers tend to be the most physically addicted), where they smoke the most, if their smoking is very temporal (every 30 minutes, indicating strong physical pattern), or very triggered (brought on by very specific triggers, ie., with coffee, on phone, indicating a strong psychological addiction). Are the smoked cigarettes rated with a strong need (four or five, indicating strong physical or psychological addiction) or a very low need (one or two, indicating a habit). Identify the triggers that you think your buddy is going to have the most trouble confronting. Reassert the option for them to stop smoking this week in the presence of that trigger. *Please note: There are some triggers that are very difficult for a person to confront while in the two weeks of physical withdrawal. For the most part I believe that confronting triggers as soon as possible is the best way to "unlearn" the conditioned association between the cigarette and the trigger, thus shortening the duration of the psychological withdrawal from cigarettes. However, triggers like alcohol (which lowers resistance and inhibitions) are often too much to handle during physical withdrawal and I recommend avoiding those until the physical withdrawal is over. Participants, for the most part will know their own limits and it is for them to

decide which triggers they will confront and which they will avoid. Stress that they need to confront them all (unless they choose to give up coffee or alcohol or any other strong triggers too) eventually and that when they are ready they will have both your support and the support of the group. When the fifteen minutes is up, have the pairs come back together to discuss what they each discovered about their buddies smoking pattern. The buddies now have a better understanding of each other and will be able to offer more constructive support after quit day!

Stress Management:

It is now time to introduce the concept of stress management and how it relates to smoking cessation to the group. Stress is often thought of as something negative, something that causes us grief. When people say that they are under stress they are usually preluding a story about something they are going through that is difficult or unhealthy. Stress, is really not a negative occurrence in a persons life at all. It is simply change of any kind that occurs in every individuals day to day life. Positive change (a promotion, a raise, moving from an apartment to a large house, getting married), or negative change (divorce, losing a job, death of a loved one). From time immemorial humans have been physically equipped with a mechanism by which we handle these normal stresses in our life. From prehistoric time (cavemen attacked by dinosaurs!) man has been managing stress. The mechanism of management I am referring to is the "Fight or Flight" response. When confronted with a stressful trigger man is equipped both psychologically and physically with chemicals that cause him to either fight (confront) or flee (avoid) the situation. This response is thought to be mediated by the hormone adrenalin, which produces a surge of energy throughout our bodies. If for some reason we confront a stressful trigger, and, as we have learned through the ages, we do not respond to it by fighting or fleeing, then this adrenalin begins to build up. When this happens we can become physically sick (our immune system is suppressed) and emotionally incapacitated. Stress management classes have seen increasing popularity in this decade as we recognize more and more the need to deal with stress in a healthy, positive, manner. When someone decides to gain freedom from smoking there are bound to be many stressers involved. Anticipatory anxiety brings about the first. When the actual date arrives and the person puts away their cigarettes several more stressers come into play. Along with the psychological craving and anxiety, the ex-smoker's bodies are about to go through a dramatic physical change. Lungs begin to heal, and oxygen is significantly increased throughout our system, producing all kinds of physical and psychological changes (alertness, increased peripheral vision, etc...).

Deep Breathing: The next exercise is one that should help you deal with the above stresses in a very pleasant way. Please play the enclosed tape, exercise #1, for the class. You should master this technique yourself before introducing it to the class, not only to help them, but for your own enjoyment!. Watch the participants and make sure they have a full understanding of the concept of "Deep Breathing". Encourage them to practice this technique at least three times a day for five minutes each time. Not only will the deep breathing reduce stress in their lives but it will also provide them with an alternative to smoking. The exercise can be practiced anywhere and at any time. The deep breathing mimics the smoking of a cigarette and can replace the artificial relaxation that smokers say they experience while smoking. This "relaxation" is actually the relief from withdrawal that the smoker experiences when replenishing their nicotine supply. I have seen this to be the number one alternative to smoking when the frequent cravings come shortly after quit day.

Homework Assignment; Recording and Rating Sheet #2:

Now that everyone is relaxed you may go on to introduce the next homework

assignment, Recording and Rating Sheet #2,(see Appendix D). This is basically the same as Recording and Rating Sheet #1 except that it asks the participants to list one thing that they could do instead of smoking (ie., deep breathing, walking, eating, etc...). They should go ahead and smoke as usual while thinking of alternatives. After next weeks class when they are no longer smoking they will look back on and hopefully utilize these alternatives. You may want to make up a handout at this time with triggers and alternative coping strategies for the group participants to look at. Take the triggers the class discussed last week and think of alternatives to them. Here are some techniques I have found useful: Doodle while talking on the telephone. Waiting five minutes when the urge comes. You see, the urge for a cigarette disappears in five minutes whether you smoke or not. Unfortunately, however, during the first few days the urges return almost as quickly as they disappear! They occur less and less frequently every day. Assure the class of this. In a stressful situation, instead of smoking, go for a walk, or take a few deep breaths. Pointing out these alternatives will be very helpful to the group over the next few weeks when the urges are the strongest and the triggers feel so incomplete without the cigarette.

Remind the class that there are two homework assignments. Practice the Deep Breathing for five minutes, three times a day, and fill out Recording and Rating Sheet #2 <u>every</u> time a cigarette is smoked. This is the last chance to get to know individual patterns of smoking and is an essential component of a smoking cessation program that produces successful non-smokers for the <u>long term</u>.

Have participants bring all of their smoking paraphernalia to the next class. (lighters, cigarettes, matches, ashtrays, cigarette holders, cigarette cases...) If someone has a valuable ashtray that they cannot part with they may want to wash it thoroughly and turn it into a candy dish, or a soap dish before the next class.

NOTES

CLASS FOUR: OUTLINE (Quit Day!)

1. Rewards and Contracts

2. Withdrawal
   a. symptoms of withdrawal
   b. coping with and speeding up the withdrawal process

3. Weight Control: Is it really an issue?

4. Positive Changes Occurring with Smoking Cessation

5. Film (optional)

6. Smoking Cessation Ritual

7. Calender

CLASS FOUR: QUIT DAY!!

Rewards and Contracts:

Congratulate the class for being here today!! This is probably the most valuable accomplishment they will ever make. It is also a very difficult one and should be rewarded. The first thing we are going to do today is fill out contracts (See Appendix E). Remember when picking rewards to figure out how much money you are spending on smoking. Be generous with yourselves! If you smoke a pack a day you will spend almost 700 dollars this year on cigarettes. Rewards don't have to be expensive. Here are some examples of rewards. Time off from work, dinner at your favorite restaurant, membership to a health club (my favorite!), a trip, clothes, jewelry, hiring someone to come in and thoroughly clean your house (After all, once the smell of smoke is removed this time it will never come back!)... Have each participant read their contract out loud and if you feel that the rewards and punishments are sufficient than you may witness their signatures.

Symptoms of Withdrawal:

Ask the group about their last cigarette smoked. Did they have a ritual? Did they have a last cigarette? Many smokers feel a need to say goodbye to smoking. This brings up one of the most common and painful symptoms of nicotine withdrawal. Many ex-smokers report a period of grieving when they finally put their cigarettes away for good. They sometimes experience bouts of crying, severe depression, fatigue, and a general feeling of doom. In future classes you may assure those participants with these feelings that it is a common symptom associated with the loss of an image of themselves that they have carried around for a long time; the image of themselves as a smoker! It is very similar to the stages we go through when mourning the loss of a loved one. Not only are the participants replacing the way they look at themselves but many feel that they are losing a good friend. For many a cigarette was their companion at a party when no one was talking to them, or something that they could do when they were lonely. It is important to note, however, as with any physical symptom of withdrawal; if it persists medical attention should be advised. This is just to insure that nothing has coincided with putting away the cigarettes which would indicate a serious emotional or health problem.

The second most reported symptom of physical withdrawal is a feeling of jumpiness, inability to sit still, a lack of concentration. This is one of the symptoms of pure physical withdrawal, and one that you can assure the class will be over in seven to fourteen days. There is a good explanation for this feeling. Red blood cells, which function to carry oxygen throughout our bodies to the different organs, contain hemoglobin. It is this hemoglobin that binds to the oxygen molecules. Unfortunately, hemoglobin has a much higher affinity for, in other words it likes, toxic carbon monoxide, better than oxygen, so if given the choice it will carry the carbon monoxide throughout our systems. When our bodies contain too much carbon monoxide, then a sufficient oxygen supply cannot get through and what happens in the most severe cases is that we suffocate. Cigarette smoke contains carbon monoxide, so people who smoke or even non-smokers who work around heavy smokers have between 30-40% less oxygen in their bloodstream than non-smokers who are free of second-hand smoke. This oxygen is decreased mainly in the brain and the smaller capillaries. The main effect on the brain is that the smoker gets used to feeling tired, a symptom that is sometimes interpreted as relaxed and just not functioning to full capacity. The effect on the circulatory system is a decrease in oxygen flow to the smaller capillaries which control peripheral vision and other sensory functions. When a person stops smoking the oxygen returns to normal within hours. The increased alertness, and increased peripheral vision is often interpreted as an inability

to concentrate. It takes several weeks, sometimes longer for the ex-smoker to get used to this new-found awareness. What is interpreted as an inability to focus or to sit still is actually an increased awareness of the ex-smokers environment!! Assure the group that this is normal and once they become accustomed to it they will see that they are much more alert and efficient than they were as smokers!! Also, suggest that they inform their co-workers, family and supervisors that they may not be up to full capacity for a few weeks. Hopefully they will get support and understanding from these people. There are, unfortunately, some occasions where an ex-smoker does not get the necessary support from their peers or co-workers. Luckily these situations occur much less frequently now that the severity of the addiction to cigarettes has been publicized throughout the media. We will have a brief lesson in assertiveness training in a class six which will help participants deal with these difficult people.(Often such people are smokers who cannot stop, or people that never smoked and cannot possibly understand the difficult time that your group participants are going through!)

The last physical symptom that is frequently reported is a change in sleeping patterns. During nicotine withdrawal participants may find that they are tired all day and that they frequently wake up at three or four am and cannot get back to sleep. They are tired because their bodies are going through a traumatic change. They need to relax, take care of themselves, reward themselves with hot baths, or days off from work to lie around and read, or watch tv. The change in sleeping patterns is one of the first symptoms to arrive and also one of the first to leave. It is very rare that someone has not improved after the first week. Simply telling them this is very comforting and provides good incentive for them to stick with it!

So, we have looked at the three most common symptoms of physical withdrawal. A period of grieving, increased alertness, and a change in sleeping patterns. Aside from prescription interventions there are several ways to make the physical transition from smoker to non-smoker a more comfortable one. Drinking a lot of liquids, particularly water and fruit juices, helps to flush the nicotine out of the system more quickly, and in many cases will reduce the physical withdrawal from a period of two weeks to five or seven days! Fruit juices that are not too acidic (apple or grape) are recommended. The best way to handle the increased oxygen flow, (jitteriness) is to use the deep breathing we learned last week. This will help with relaxation and focusing on the here and now. Exercise is another way to shorten the physical withdrawal and minimize the psychological withdrawal. In class seven we will go into detail about what exercises to use and how much time should be spent working out. For now, simply walking, getting fresh air, or stretching can be very helpful.

Weight Control During Smoking Cessation:

A concern to everyone is the issue of weight control during withdrawal. The fact is that 1/3 of the people who stop smoking gain weight, 1/3 of them lose weight, and 1/3 stay the same. If a person replaces smoking with eating, then they are bound to gain weight. For the two weeks of nicotine withdrawal I tell the class to eat whatever they want and not to diet or break any other habits or addictions at the same time. If food, chocolate or other, makes them feel better and helps them get throughout the two weeks, then that is fine. As we learned last week, smoking a pack a day is equal to carrying around fifty to seventy-five pounds of extra weight. If a participant gains five pounds during nicotine withdrawal then that is fine with me. Once the withdrawal is over, however, let the food management begin. In class seven we move from chocolate to carrot sticks, from ice cream to celery!

There are also some physiological reasons why an ex-smoker may gain weight from not smoking. These are, however, insignificant and represent only a few pounds at the most. I will address them, however, just in case questions are raised

about them. When a person stops smoking there is a small change in metabolism and they may gain a pound or two for this reason. Because our bodies work on what is called a "negative feedback system" this change in metabolism is quickly noted and accounted for. The only other factor involved in weight gain involves the production of a lipase enzyme, a chemical in our system that eats away fats. Nicotine, especially in women, has been shown to stimulate the production of this enzyme, therefore people who smoke have more than people who don't. The amount stimulated by nicotine, however, is so small that it to is insignificant in weight control. There are many things that stimulate this enzyme. Caffeine is one, (one that I don't recommend increasing) and exercise is another. It only takes about five minutes of exercise to raise the level of this enzyme to that raised by the nicotine in several packs of cigarettes! So, if you want to metabolize food more efficiently and raise the level of lipase enzymes in your body, then EXERCISE!

Positive Changes Occurring with Smoking Cessation:

Let's move away from talking about all the negative things encountered when we stop smoking. There are many wonderful, positive changes that ex-smokers will begin to see almost immediately after stopping. Aside from a sense of accomplishment and self admiration, several physical changes begin to take place which in themselves often provide the best motivation to keep on going. Foods begin to taste better. When a person smokes cigarettes, taste buds are coated and therefore unable to fully experience taste. The morning cough disappears very quickly. Participants will be able to climb stairs easier, they will be able to smell better, feel stronger and the risk of sudden death from a heart attack is reduced significantly immediately following smoking cessation.

Film: (optional)

If you have access to the film "The Feminine Mistake" or "The Hugh McCabe Story" this is a good time to show one of them.

Smoking Cessation Ritual:

Now is the moment you have all been waiting for. Pass a trash bucket around the room and have everyone toss their smoking paraphernalia into it. Follow this by a round of applause and congratulate everyone for taking the biggest step imaginable to increase their health and happiness for a longer life.

Calender:

See the Calender (Appendix F) and find stickers for the participants to use each night when they are successful as non-smokers. When the calender is complete (it looks sooo beautiful when every day has a sticker), participants may give themselves the rewards promised on the contracts filled out earlier. If setbacks occur it is very important to reassure the group that they have not failed. I like to look at setbacks as practicing. Some people need more practice than others!

NOTES

CLASS FIVE: OUTLINE

1. Questions and Answers
   a. physical symptoms
   b. psychological concerns

2. Progressive Relaxation Training (PRT)

3. Cognitive Therapy
   a. disputing negative thoughts

4. Concerns about Success

5. Maintenance

CLASS FIVE: (Support Group)

Questions and Answers:

The first thing I usually do in class five, since it is so close to quit day and serves mainly as a support group, is to go around the room and ask the class to talk about how they are feeling. I often have a physician present, or a panel of ex-smokers to answer questions the group may have about the physical symptoms they are experiencing. They need a lot of reassurance at this time that the physical symptoms will be disappearing the next time you see them if they are not totally gone. Depending on the group this can take a good part of the class.

Progressive Relaxation Training (PRT):

Make sure everyone has been practicing the deep breathing. Mastering this technique is very important so that they can go on to the next step in relaxation, Progressive Relaxation Training (PRT). Point out that most of the group appeared so calm and relaxed at the last class. Have the participants take notice that they may seem jittery today. Their legs may be swinging back and forth, or they may be twiddling their thumbs. Whatever the form of expression may be, you are probably looking at a group of people in need of relaxing! This is a good time to play exercise #2 on the enclosed cassette, Deep Muscle Relaxation or more commonly called PRT. Have the participants remove any tight jewelry and lie comfortably on the floor as they prepare for the twenty minute exercise that follows on the tape.

Cognitive Therapy:

I hope everyone enjoyed that! It may take awhile for the class to get settled back in their chairs. Now that they are relaxed it is a good time to talk about another coping strategy that will prepare them for those frequent urges to smoke. This intervention is primarily for the urges brought on by stress or at times of low self esteem. It is the concept of positive self-talk and is most commonly used in cognitive psychology. Cognitive/behavioral interventions have become increasingly popular in treating people with addictive personalities or patients who have phobias. It is based on the following assumption. Environmental stimuli are not sufficient in causing an individuals emotions. It is instead, the individuals own interpretation of that stimuli that causes one to feel a certain way. Let's say you are working on a very important project that needs to be completed by the end of the day. Your eyes are beginning to hurt and you reach for a cigarette because you need a break. You may be telling yourself that you cannot leave your desk or just close your eyes for a minute and take the time out that you want because that would make you inadequate in your position. "Someone else would be able to get this project out more quickly and efficiently without the need for a break". The cigarette you are about to smoke is merely an excuse to stop for awhile and unwind. You are just not confident enough to change your negative self talk to a more positive and likely a more realistic assessment of the situation. For example, in a similar situation try to realize that the project is just too complicated to get done adequately in such a short time. Anyone would need a break with all this work. Shift the responsibility away from yourself and to the work load. Have the confidence in yourself to take a much deserved break; do some deep breathing; or just close your eyes for a few minutes. Another example: Let's say you are walking down the hallway and someone you know is coming towards you. You say hello as they pass but they don't respond. You tell yourself "That person must not like me" or "Boy, I am really not very important around here, no one even recognizes me". This is definitely negative self talk. A more positive interpretation of the situation would be to think "He must have a lot on his mind, he didn't even hear me say

hello!" or "He's really out of it today". So you see, the people in the above examples did not feel inadequate because of the situations they were in, but because of the way they interpreted those situations. In the course of a day we all encounter many situations that are open to our interpretations. Let's try to take a positive view and the only thing that can happen is we will feel stronger, more confident and happier. While the group goes through withdrawal from cigarettes they are likely to have a lot of negative self talk, "I'll never make it", "I cheated so I am a failure". Make a list of the negative thoughts the group reports and have them practice turning them, in class, to positive ones. "I cheated so I guess I just need more practice then some people" or "I know I can stop smoking, it is just going to take a lot of hard work".

There are some situations we encounter, often involving other people, that all the positive self talk in the world couldn't remedy. In these situations we need to find an effective form of communication to resolve the issues. Next week we will discuss an "assertive" means of communication that allows conflicts to be resolved, and complements to be given, in a most effective manner. This will be important in dealing with people who sometimes make our already difficult task of smoking cessation even harder.

Concerns about Success:

If some members of your group are expressing serious concerns about their possibility of success and are still smoking, then you may want to consider intervening with Nicorette gum at this time. Use this only as a last resort, and again, refer to the article in the Appendix before prescribing.

Ask for any questions and take the groups concerns seriously. Go over all the interventions and alternatives to triggers discussed so far. By doing this the group will feel that they are better prepared to handle the cravings that take place over this, their first weekend without a cigarette. The weekend is often a hard time for people because a lot of social events take place. Social situations present many triggers to smoke. They often involve drinking alcohol, which lowers a persons resistance and is often the most treacherous trigger to encounter so soon after cessation. You may want to recommend that some people avoid alcohol for a while, until they are more confident in seeing themselves as non-smokers.

Maintenance:

One of the best ways to stay free from cigarettes is to begin to actively see yourself as a non-smoker. This is very difficult for some people. It is after this realization however, that one is truly free from cigarettes. A good way to promote this image as non-smokers is to let other people know you no longer smoke. If a party is on your agenda, begin the evening by expressing that you are going through nicotine withdrawal and ask for help with your urges so that you can be successful in something very important to you. It will only be the most ignorant of people that try and tempt you to smoke at this time! Another way to feel smoke free is to help someone else stop smoking. Or ask to be seated in a no-smoking section in a restaurant. If you are planning a trip, make reservations to sit in the no-smoking section of the plane. Even better, volunteer to help teach a class just like the one you are taking right now. It would be awfully hard to go back to smoking while teaching others to stop.

NOTES

CLASS SIX: OUTLINE

1. Film (optional)

2. Class Concerns
   a. withdrawal
   b. confidence

3. Assertiveness Training

CLASS SIX

Film (Optional):

If you have access to the film "Death in the West" (60 minutes), show it at the beginning of todays class.

Class Concerns:

Most of the participants are still in the middle of nicotine withdrawal so they may be a little jumpy or irritable. This is a time that they need a tremendous amount of reassurance that the end of nicotine withdrawal will occur before the next time you meet. Some of the participants may already be over the hardest part of the physical withdrawal. Especially if they have been exercising and drinking a lot of fruit juices! Even those that are still experiencing some of the physical symptoms have probably seen some positive changes in their health. Ask the group if things have started to taste better. Stronger? They may notice that they don't need to add salt to their meals, or that chocolate tastes even better! Another short term change that is very rewarding is the ability to climb stairs, or exercise in general more easily . Morning coughs are usually much better by now. One of the most rewarding benefits, however, is the feeling of accomplishment that is a result of taking control over ones life. This is one of the benefits most likely to prevent your group from going back to smoking.

Congratulate everyone for being in class tonight. You may find that some of the participants are still smoking, or have cheated over the weekend. Reassure them that they have not failed because of this. The fact that they have come to class tonight assures you that they are still concerned about stopping and will probably go on to become non-smokers after a little more practice. Key in on the triggers that caused them to smoke. Suggest avoiding these triggers for awhile. Think about the possibility of Nicorette gum at this time. Have the group give suggestions to those participants who are having problems. What could they have done instead? By overcoming just one powerful trigger you will be stronger than ever. Each time you are challenged, and don't succumb to the urge, you are eliminating one more situation that was difficult for you.

Assertiveness Training:

In the last class we learned a little about cognitive psychology and the benefits of positive thinking. We learned to dispute negative thoughts and hopefully over the weekend, had a chance to practice this. There are, unfortunately, situations that require more than the changing of our own thoughts to provide resolution. In our everyday interactions with other people we often find that there are times when we need to resolve an issue with that individual. It can be a situation where we want to express thanks to that person, or one that we are angry about and need to communicate that. Often people deal with situations like these by acting either passively (pretending nothing happened, holding it in and not reacting at all), or aggressively (overdramatizing, shouting). Go back to our discussion about stress and look again at the "Fight or Flight" response. Remember that every stimulus needs to be reacted to in a way that will prevent an irrational response. Acting passively in a situation that we care about suppresses a natural response. Chances are we will no longer hold them in and then we will either blow up or become physically ill. If we act aggressively, chances are we have not given the situation adequate thought and our response will not be well received by the other people involved. It may feel better for a while, but ultimately the situation will go unresolved and is subject to recurrence. The only reaction that adequately releases the stress of the

situation is an "assertive" response. The art of being assertive does not come naturally. It requires a lot of practice. You may have noticed six or eight week assertiveness training classes springing up around the world. The concept of assertiveness is really very simple and only requires a few minutes to explain. It is the homework and the practice involved which determines such lengthy classes. I usually break down an assertive response into four steps:

1. Statement of Occurrence. This is a time to assess the situation and find a way to express to both yourself and the other people involved, your interpretation of exactly what happened. In situations of conflict this can be very helpful in postponing what can often turn into a very aggressive response. It is like counting to ten before you jump. Often, while preparing this statement you may discover facts you overlooked that resolve the situation without going any further. Most of the time, however, you will need to proceed. Begin your communication with the person involved using this statement.

2. Statement of Understanding. Now that you have expressed your interpretation of the situation to the other person involved, you must find a way to understand why they might have done whatever it is they have done (this might be very difficult with all the anger you are feeling). There two main reasons for this. The first is so you can put yourself in their shoes and have an understanding of their perception of the situation. This will make the resolution easier in the end. The second reason is a little bit manipulative. By understanding them and showing concern for their motives you will insure that they will really care, and be involved when you move on to step three.

3. Statement of Emotion. Finally, the time has come to raise your voice in anger, or praise and really emote. Now, if you had stormed into your co-workers office and started yelling with no introduction or statement of understanding and then turned around and walked out you wouldn't have left much of an impression. This way not only do you have their attention, but since you showed concern for them, they will probably do the same for you. Go on until you feel better. Let it out.

4. Statement of Resolution. This is the time to propose resolution so similar circumstances will be sure not to (or if it is a good situation will be sure to) happen again in the future.

*Please note that these four steps require some preparation before the confrontation can take place successfully. It is very important to understand that there are some situations where the most assertive people cannot resolve an issue through this form of direct communication. It is in these rare instances that the best solution is to remove yourself from the situation completely. This may seem passive, however, if the effort to be assertive has been made to no avail, it is usually indicative of a problem inherent in the other person or the situation itself. Hopefully none of us will encounter many of these circumstances. If we do, however, we can feel confident that we tried to resolve the situation in a rational, mature way and we are not at fault.

Have your participants talk about how they would react to the following situation (or any other situation that you would like to use as an example): You spent last night in your office until 12:30 organizing some papers you had prepared for a meeting into a very specific order. This process had taken you more than four hours to complete. The next day at work the office was very crowded and one of your co-workers couldn't find a place to eat, so they decided your desk was as good a place as any. They moved all your papers from the night before to one side, thereby combining them and bringing you back to square one with regards to organization. You really don't have four more hours to separate them before the meeting was to take place. You are furious. What do you do? Do you act passively and not say anything? Do you go into your co-workers office yelling about the situation and not giving them a chance to give their side of the story? Open this up for group discussion. What would be the best reaction?

Form pairs and have each pair role play different situations they would like to resolve, some related to smoking. Practice being assertive.

NOTES

CLASS SEVEN: OUTLINE

1. Exercise
2. Diet
3. Celebration Preparation
4. Questionnaire

CLASS SEVEN:

This is the last session and one in which loose ends need to be tied. Although a key to maintenance in this program is an enhanced self image as a non-smoker among each participant there are several other things that feed into that image. Proper diet and exercise are important maintenance tools. During the course of the past six weeks we have allowed a lazy attitude towards them. The reason for this was to allow as much comfort during the physical withdrawal from nicotine as possible with minimum change in ones routine, thus minimum stress (remember, stress is induced by any change, either positive or negative). Now that the physical withdrawal is over we will prepare an exercise routine for each participant. We will also try and insure that they either return to their normal eating patterns or replace their original diet with a more balanced and nutritious one.

Exercise:

Most of us spend ten minutes a day brushing our teeth. This is an hour every week that we devote to the maintenance of one part of our body, and this is such a routine to most of us that we don't think twice about it. Exercising for one hour a week is enough to add quality to and prolong the life of our whole bodies, yet most people don't even do that. Now that the participants have taken the first step towards a longer and healthier life by putting away their cigarettes, it is important for them to enhance this healthy attitude. The key to planning a successful exercise routine is to be realistic about the type of exercising one is going to commit to. First find out if there is anyone in the class who is not currently on any kind of exercising regimen. It is important for these people to see their physician before beginning a routine to insure that there are no limitations, and if there are, to account for these. Some of the participants will have a hard time deciding what it is they want to do. Have everyone make a list of the exercises they did in high school. Then a list of the exercises that they think they might enjoy, or that they enjoy watching other people do. Somewhere in here you should be able to come up with an ideal option for everyone in your group. The most important thing is that the exercise they choose is adequate in getting their heart rate up into their "aerobic zone" for twenty minutes, three times a week. Have everyone calculate their aerobic heart rate. This is done by subtracting their age from 220. Multiply this figure by .8 and the result gives the number of beats per minute that their heart should be producing during exercise. They can monitor this while exercising by taking their heart rate from their wrist or side of neck for 10 seconds a couple of times during the twenty minutes of exercise. Multiply the result by six. If the result is more than their calculated aerobic rate than they should slow down, if it is less than they should pick it up. If someone cannot carry on a conversation while they exercise it is an indication that they are working to hard and defeating the benefits by putting added stress on their hearts (and probably their bones and muscles too!). Although it is critical to a long healthy life to exercise regularly it is equally important to start out slowly and comfortably. Be realistic about your goals when you begin an exercise program. If you push too hard, or overestimate yourself, than you will undoubtedly feel enough pain and discomfort to deter you from maintaining your program. Exercise should be something you enjoy. Something that enhances your life, not something to dread or avoid. There is an ideal exercise for everyone. Aerobic heart rates can be obtained through brisk walking, running, cross country skiing, swimming, rowing, bicycling and many other activities. Find something you enjoy and stick with it. It may be hard sometimes and it is a commitment but within a short time it will become a way of life, a better way of life for all.

Diet:

As we mentioned last week, the days of eating chocolate and ice cream to replace the urge for a cigarette are over. It's time to resume our normal eating patterns or if those were inadequate to start eating foods that will further enhance our health and self image. It is very important that food does not replace smoking as another unhealthy habit. Approximately 2/3rds of your participants have changed their eating patterns in some way to compensate for smoking cessation. About half of those have started eating more and the other half less. The participants will know if this change is presenting a problem in their lives. Go around the room and ask everyone if they have lost or gained weight since quit week. Weight can be controlled most effectively by utilizing the same interventions as those used for smoking cessation. Behavioral modification techniques can be very useful for maintaining a healthy diet. You can use the Recording and Rating Sheets to monitor your food intake the same way you monitored your smoking. This will help you to identify unhealthy, individual eating patterns and foods and either replace or eliminate them as needed. The relaxation exercises will also help in maintaining a healthy diet by reducing stress; often a trigger for eating or fasting. Weight is determined by simply counting calories in and calories out; if you have more coming in then going out you gain, vice-versa you lose. The quality of those calories is critical to your health. Eating a high carbohydrate, moderate protein, low fat diet is the optimal choice. Eating a larger meal early in the day as opposed to late at night has been shown to be much healthier. Fast diets are not a good idea for several reasons. They often overlook our dietary needs in the foods they offer. A very low calorie diet can actually trick the set point in your ventromedial hypothalmus and lower the amount of calories you actually need to gain weight! By alternating the number of calories you eat everyday you can actually trick your brain so that this "thermometer" doesn't reduce it's "temperature". Spend as much time as necessary addressing individual concerns with regards to diet and nutrition. Monitor those participants that you feel may have replaced the addiction of smoking with an eating addiction over the following sessions.

Celebration-Planning:

This is the last official class. It is a good idea to either go to a restaurant or plan a pot luck dinner in the classroom next week to celebrate. Even those that are still smoking should come and celebrate their efforts and new awareness about the hazards of tobacco. This awareness will eventually bring them to a time when they to are ready to put away their cigarettes for good. Remember, some people need more practice then others. Have everyone invite friends, family, and co-workers who have given them support over the last several weeks. They may also want to invite smokers they know who are interested in stopping. If the group chooses to go to a restaurant be sure to have one of the participants make the reservations; to sit in the NO-SMOKING section!

Questionnaire:

Before everyone leaves today have them turn in the "End of Clinic" questionnaire (Appendix G). Please record the number of participants on each form. If possible contact the participants in six months and record their successes and relapses on these forms. Next week I suggest planning a one month support group for the participants. This support group is a good time to record follow-up information. Once this is complete (either at the one month support group or in six months by telephone or mail) please mail the forms to me at Main State so that I may use them to determine the success rate of the program. The American Lung Association has close to a 25% success rate after six months. This may seem discouraging, however, it represents many lives that are touched and most of the participants that begin smoking again will eventually go on to become free from cigarettes.

NOTES

CLASS EIGHT: OUTLINE

1. Film (optinal)
2. Celebration!!
3. Conclusion

Class Eight

Film:

"For a Change" is the suggested film for class eight.

Celebration:

You know how!

Conclusion:

If possible it is important to plan a one month follow up at this time. The group support and commitment was probably instrumental in the success of the participants. Many of them will be insecure about leaving the group. Buddies often keep in touch well after the class ends. The next month is critical in coping with the psychological withdrawal. Knowing that they have the group continuing for another month can be very helpful to their success. At this time hand out copies of the article "Hope all Things, Endure all Things" (Appendix H) to enhance motivation for maintenence. Plan an informal meeting one month from today. In our domestic smoking cessation program I hold a bi-weekly support group for ex-smokers. This has been very successful. Sometimes one person shows up, sometimes several. Mainly, ex-smokers throughout the Department know that they have a place to go for support at difficult times and this gives them the strength to go on. After all, support groups for Alcoholics and other chemical abusers meet daily. The Surgeon General calls cigarettes one of the strongest addictive substances, indicating an equal need for ongoing support.

Thank you, and congratulations for taking the time to improve the quality of all the lives you have touched throughout this course.

NOTES

APPENDIX A

Price list and ordering information on
films suggested for class use.

Films

Price and ordering information.

"Is it Worth Your Life?"; $104.75, and "The Hugh McCabe Story: The Couches Last Session"; The American Lung Association of D.C., 475 H Street, N.W., Washington, D.C. 20001, 202-682-5864.

"The Feminine Mistake"; $125.00, and "Death in the West"; $95.00; Pyramid Productions, Box 1048, Santa Monica, Ca. 90406, 1-800-421-2304.

"For a Change"; $415.00; Spectrum Films, Inc., 2755 Jefferson St. Suite 103, Carlsbad, CA. 92008, 619-434-6191.

Please note: The Office of Tobacco Hazard Education, M/MED, has several copies of each of the above films available on VHS for short-term loan. Contact me, Judith Berman, M/MED/TH, Room 2906, Main State, 647-0133 for further information.

*For those non-smokers concerned about the hazards of environmental tobacco smoke the film "Second-Hand Smoke", available from the D.C. Lung Association provides an amusing approach to the subject and makes for a good lunchtime seminar at your post. For those instrumental in creating safe smoking policy, Ed Asner's film, "Where Theres No Smoke" provides guidelines that will prove to be very helpful.

APPENDIX B

"The Use of Prescription Drugs as an Intervention to Smoking Cessation"

United States Department of State

Washington, D.C. 20520

Using Prescription Drugs as an Intervention to Smoking Addiction

Judith D. Berman, Coordinator, Tobacco Hazard Education; Frank V. Keary, M.D., Ass't. Medical Director for Domestic Programs.

The U.S. Surgeon General has recently reported that nicotine is as addictive as heroin and cocaine. Patients trying to gain freedom from smoking are likely facing the hardest challenge of their lives.

Unlike other narcotics where the addiction is primarilly physical, addiction to cigarettes has three major components. Along with the strong physical component smokers are faced with psychological withdrawal (triggered by classically conditioned urges, ie. with coffee, upon waking...) and the "unlearning" of a habit. Patients going through the withdrawal process need a long term support system, either individually, or ideally, as part of a group. This support should involve coping strategies for dealing with the stress of withdrawal, education to teach smokers the hazards of smoking, and most importantly, behavior modification techniques so that they can become aware not only of what makes them smoke but also why they want to stop. This final intervention is what prevents the smoker from picking up a cigarette six months or a year later.

Over the past five years pharmaceutical companies and researchers have struggled to find the exact mechanism of nicotine addiction. This research has lead to the discovery of several drugs that ameliorate some of the symptoms of nicotine withdrawal. Prescription drugs can be very helpful for those patients who have tried, but just cannot manage both the physical and psychological withdrawal at the same time. The drugs primarilly delay or reduce the symptoms of the physical withdrawal but will not deal with the psychological and behavioral component. They should be used only to increase the efficacy of the patients supportive, educational network and not as an independant solution .

In our domestic smoking cessation program we have shown that only 3-5% of the group participants require any drug intervention.

Let us take a brief look at two of the most common prescription drugs used today.

Nicorette gum (nicotine polacrilex)

Nicorette contains nicotine bound to an ion exchange resin in a chewing gum base. This binding allows the nicotine to be released only during chewing and hence will not be released in significant amounts if the gum is accidently swallowed. The nicotine is absorbed through the buccal mucosa.

Nicorette gum is the most commonly prescribed treatment to aid in smoking cessation. Since the patients primary addiction is already to nicotine the gum allows the patient to isolate the equally, if not more difficult psychological withdrawal from cigarettes. Once the patient is in control of the behavioral component of the addiction they may be better equiped to handle the two to three weeks of actual physical withdrawal from nicotine. Nicorette, an oral medication , has the advantage of preventing the patient from eating instead of smoking. In short, the patient using nicorette properly, in most cases, will experience no symptoms of nicotine withdrawal and the chewing gum will prevent them from replacing cigarettes with food. The 1988 PDR states that Nicorette should be used as an "adjunct to a smoking cessation program".

The following test was designed to aid the health care worker in choosing which patients may need Nicorette.

The Fagerström Nicotine Tolerance Scale:

1.) How soon after you wake up do you smoke your first cigarette?
A.) After 30 minutes. B.) Within 30 minutes.

2. Do you find it difficult to refrain from smoking in places where it is forbidden, such as the library, theater, doctor's office?
A.) No. B.) Yes

3.) Which of all the cigarettes you smoke in a day is the most satisfying one?
A.) Any other than the first one in the morning. B.) The first one in the morning.

4.) How many cigarettes a day do you smoke?
A.) 1-15. B.) 16-26. C.) More than 26.

5.) Do you smoke more during the morning than during the rest of the day?
A.) No. B.) Yes

6.) Do you smoke when you are so ill that you are in bed most of the day?
A.) No. B.) Yes

7.) Does the brand you smoke have a low, medium, or high (0.9mg) nicotine content?
A.) Low. B.) Medium. C.) High

8.) How often do you inhale the smoke from your cigarette?
A.) Never. B.) Sometimes. C.) Always.

Assign no points for each A answer, 1 point for each B answer, and 2 points for each C answer (note that not all questions have an answer in column C). Then, total the number of points to arrive at te Fagerstrom score. the highest possible score is 11. Consider patients who score 7 or more to be highly dependent on nicotine; patients who score 6 or less have low to moderate nicotine dependence. Bear in mind that a low score does not rule out the use of nicotine chewing gum or other therapy based on physiologic nicotine addiction. In general, however, the higher the score, the better the result of such therapy.

The following regimen has been shown to be the safest and most beneficial:

Instruct patient to reduce smoking to one pack a day before considering the use of the gum. The level of nicotine in the gum is not enough to compensate for smoking more than this amount. It is critical to chew the gum properly and in the recommended dosages to provide relief of withdrawal symptoms. We recommend using 2mg doses until further studies have been done on the higher (4mg) dose. To monitor patient we initially prescribe enough gum for three months (maximum dosage of 30 per day). During the first two weeks when symptoms are the strongest the ratio should be one piece of gum for each cigarette smoked not to exceed 30 pieces per day. Over the next ten weeks use one piece for every two cigarettes smoked.

The patient must give up smoking completely before beginning the use of Nicorette. Smoking while using nicorette will not only reduce the success of smoking cessation but will increase any chance of adverse effects to the patient. It has been shown that nicotine can produce delirium, cardiac irregularity and respiratory difficulty if taken in high doses.
It is wise for the patient to hold the gum between his/her gum and cheek periodically without chewing. If the gum is chewed too quickly stomach upset may develop. The 1988 PDR warns Female patients that "Nicorette contains nicotine which may cause fetal harm when administerd. Do not take nicorette if you are pregnant or nursing." Also, as with other prescription drugs, Nicorette should be kept out of the reach of children.

A placebo gum is contemplated by manufacturers but in the meantime the patients in our domestic smoking cessation program are mixing regular chewing gum with the Nicorette to gradually reduce their nicotine intake until the prescription gum is no longer needed. Gradual withdrawal from the gum should be initiated after three months' usage and completed by six months. Says the 1988 PDR "The use of Nicorette beyond six months is not recommended". Our physicians write prescriptions for three months with one refill (three more months) and then discourage further use of the product.

Less than 3% of the patients transfer dependence to the gum. Even if transference should occur, this dependence is far superior to the continued use of tobacco products and the

repeated inhalation of carcinogens which promote vascular diseases, cancers, and other harmful effects on almost every bodily system.

Clonidine

A transdermal form of clonidine hydrochloride (Catapres-TTS) has recently been marketed for the treatment of hypertension. This method of delivery provides for therapeutic levels of clonidine for approximately seven days and has the advantages of steady-state blood levels, decreased side effects, and increased compliance.

In relation to smoking cessation it has been shown that transdermal clonidine treatment significantly ameliorates the acute withdrawal symptoms of craving, anxiety, irritability, and restlessness associated with smoking cessation. Impairment of concentration and hunger due to smoking withdrawal were not significantly reduced with the clonidine group compared with the placebo group. However, any improvement of concentration may have been negated by the sedating side effects of clonidine.

Central adrenergic hyperactivity in the locus ceruleus and amygdala has been cited as one cause of nicotine withdrawal symptoms. Clonidine is an alpha-2 agonist. It exerts a presynaptic inhibition on the noradrenergic neurons of the locus ceruleus, thereby preventing an increase in the rate of firing of these neurons when nicotine is withdrawn.

Please note the following precautions from the 1988 Physicians Desk Reference:

"General: In patients who have developed localized contact sensitization to Catapres-TTS (clonidine), substitution of oral clonidine hydrochloride therapy may be associated with development of a generalized skin rash. In patients who develop an allergic reaction to Catapres-TTS that extends beyond the local patch site (such as generalized skin rash, urticaria, or angioedema) oral clonidine hydrochloride substition may elicit a similar reaction. As with all antihypertensive therapy, Catapres-TTS should be used with caution in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease, or chronic renal failure. Transdermal clonidine systems should be removed before attempting defibrillation or cardioversion because of the potential for altered electrical conductivity which may enhance the possibility of arcing, a phenomenon associated with the use of defibrillators.
Withdrawal: Patients should be instructed not to discontinue therapy without consulting their physician. Sudden cessation of clonidine treatment has resulted in subjective symptoms such as nervousness, agitation and headache, accompanied or followed

by a rapid rise in blood pressure and elevated catecholamine concentrations in the plasma, but such occurrences have usually been associated with previous administration of high oral doses (exceeding 1.2 mg/day) and/or with continuation of concommitant beta-blocker therapy. Rare instances of hypertensive encephalopathy and death have been reported. An excessive rise in blood pressure following Catapres-TTS discontinuance can be reversed by administration of oral clonidine or by intravenous phentolamene. If therapy is to be discontinued in patients receiving beta-blockers and clonidine concurrently, beta-blockers should be discontinued several days before cessation of Catapres-TTS administration. Patients who engage in potentially hazardous activities, such as operating machinery of driving should be advised of a potential sedative effect of clonidine."

The above precautions are written for patients who are taking clonidine to lower blood pressure. For those patients taking clonidine to aid in smoking cessation we recommend that they are monitored to determine that their systolic blood pressure is not below 90mm/hg. The recommended dosage for smoking cessation is .1mg/day, available with Catapres-TTS #1.

We prefer the use of nicorette gum to clonidine because it does not involve the use of an antihypertensive drug in someone who may not be hypertensive. Also, the potential hazards and side effects are more pronounced with clonidine.

Although some argue that using nicotine gum is transferring dependence, studies have shown that this only happens in 3% of the patients.

We again stress that medicinal intervention should only be considered when a patient has demonstrated inability to cope with both the physical and psychological effects of nicotine withdrawal, concurrently, and should only be prescribed as an adjunct to a smoking cessation program.

Other drugs have made their way into the "Quit Smoking" limelight. We do not feel they have been studied sufficiently to warrant their use.

1.) Ornish, S. et.al,. Arch. Intern. Med., Vol 148, Sept, 1988; p. 2027-31.

APPENDIX C

Recording and Rating Sheet #1
Xerox and use for class

RECORDING AND RATING SHEET #1

Cigarette #	Need Rating 1-5(most)	Where	With Whom	Mood/Reason Trigger

APPENDIX D

Recording and Rating Sheet #2
Xerox and use for class

RECORDING AND RATING SHEET #2

Cigarette #	Need Rating 1-5(most)	Mood/Reason Trigger	What Could You Have Done Instead? (Coping Strategy)

APPENDIX E

Reward Contract

****

CONTRACT**CONTRACT*****CONTRACT*****CONTRACT*****CONTRACT*****CONTRACT****

I_____ agree to remain smoke-free for the next thirty days. If I am successful in this effort I will give myself the following reward _____
_____
_____
_____. If I am not successful, I will do the following.* _____
_____
_____
_____.

Signed _____ Date _____
Witnessed_____ Date _____

*Remember to be realistic with rewards and punishments. Figure out how much money you will be saving on cigarettes while figuring out rewards. Be strict enough with punishments so that you will add incentive to remain free from cigarettes.

CONTRACT**CONTRACT*****CONTRACT*****CONTRACT*****CONTRACT*****CONTRACT****

****

best copy available

APPENDIX F

Calender
(To monitor time free from cigarettes)

REWARDS CALENDAR

QUIT DAY

1 2 3 4 5 6 7

8 9 10 11 12 13 14

15 16 17 18 19 20 21

22 23 24 25 26 27 28

29 30 I QUIT

BUTTS OUT

smoke free

clean lungs

APPENDIX G

End of Clinic Questionaire

END OF CLINIC QUESTIONNAIRE

NAME _____
WORK ADDRESS _____
WORK PHONE _____
DATE _____

1. At what age did you begin to smoke? _____ Why? _____
_____

2. How many years did you smoke? _____

3. How many cigarettes did you smike at the beginning of the clinic?
_____ per day.

4. Are you currently smoking cigarettes? _____. If yes, how many? _____ per day. If no, when did you quit? _____.

5. Prior to the clinic had you ever smoked tobacco in any other form? _____ After the clinic began did you try smoking tobacco in any other form? _____ What form, if yes? _____

6. Have you utilized any interventions other than those presented in class to aid in smoking cessation during this clinic? _____
If yes, what were these interventions? (ie., hypnosis, nicorette gum, clonidine patch, etc...) _____
_____
_____ Are you presently using this intervention? _____

7. How many sessions of the clinic did you attend? _____

8. What parts of the clinic did you find most helpful? _____
_____
_____
_____
_____ Least helpful? _____
_____
_____
_____

9. The clinic leader was: (check one)

	ALWAYS	SOMETIMES	NEVER
a. Able to answer questions:			
b. Organized and prepared:			
c. Comfortable:			
d. Encouraging:			
e. Urged group participation:			
f. Maintained groups interest:			
g. Had good rapport with group:			
h. Comforting and supportive:			
i. Available when needed:			
j. Up-to-date on material:			

more on next page---

10. Do you have any suggestions that would improve the clinic? (please be prolific!) _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____.

11. Have you ever tried to stop smoking before? _____
For how long? _____ How many times? _____

THANK YOU AND CONGRATULATIONS FOR COMPLETING THE PROGRAM!

Please do not write below this line.
For instructor use only.

# of people in clinic _____
One month follow up _____ Smoking? ___
Six month follow up (if applicable) _____ Smoking? ___
Comments: (Are any other interventions being used?)

_____

APPENDIX H

"Hope all Things, Endure all Things"

HOPE ALL THINGS, ENDURE ALL THINGS

Dr. Paul Adkins Glanced at the Clock Above the Lightbox. It Was 3:10 PM on Wednesday, April 2, 1980. He Took a Final Look at His X-Rays and the Thought Hit Him: "I Am Looking at My Own Obituary."

BY JOHN PEKKANEN

The fatigue began in January. It was then that Dr. Paul Adkins first sensed that something might be wrong. He was 54, professor and chairman of surgery at the George Washington University medical school. A nationally recognized thoracic surgeon, he had been surrounded by illness for more than thirty years but had never been seriously ill himself.

In the beginning he tried to ignore the fatigue, to convince himself that it was caused by a combination of work and minor illness and would soon pass. But he couldn't ignore the disturbing fact that a man who had seldom needed more than seven hours of sleep a night, whose years of surgical residency had been marked by thirty- and forty-hour vigils, was now napping occasionally in the afternoon on his office sofa.

He was a man trained to logic and deduction, and he now was using that training to persuade himself not to become alarmed. But deep inside, down where the gut knows what the mind may deny, there were dark possibilities. It was not always easy to ignore them.

He recognized the irony. For his entire professional life he had diagnosed the sources of pain, the sounds of a chest, the rasp of a cough, the manifold murmurings of the human body. He had done this so many times for so many patients that he had long ago lost count. But now he was unwilling to focus this knowledge and experience on himself.

The fatigue persisted.

He realized that his history was against him. Although his body was still athletically trim, he had smoked cigarettes since he was fifteen. The habit intensified when he served as a surgeon in Army hospitals in Korea and Japan during the Korean War. He understood the implications of smoking up to a pack and a half a day for close to forty years as well as anyone in the country: He had removed some 2,000 cancerous lungs in surgery.

But there was so much happening that month that he was easily distracted from thinking about himself. It was in many respects the culmination of his career, because on January 22, in Atlanta, he was to deliver the presidential address of the Society of Thoracic Surgeons, the largest organization of its kind in the world.

It was the most important speech of his life and he labored over it, not only on the ideas but on the words. Although a man of science, he had harbored a love of language since childhood and could still recite reams of poetry by Keats, Shelley, and Milton that he'd learned forty years earlier in Rutland, Massachusetts, and later, after his family moved here, at St. John's High School. He would recite this poetry to close friends and family.

In his neighborhood on Kirkwood Drive in Bethesda—a tree-lined street of large, comfortable homes—he was the resident poet, always called upon to write funny poems or limericks for birthdays and anniversaries.

At the hospital he wore quite another face. There he was first and foremost a surgeon: decisive, hard-headed, willing to take greater risks than most. He was a man certain of himself and at the same time shy to an extreme.

The surgical residents he loved to teach called him "The Boss." Virtually all the younger residents were, in the words of a GW colleague, "scared as hell of him." He seldom abided small talk. His sarcasm could be biting and his glare intimidating. But those residents who progressed steadily in the residency program began to realize there was more to him than the stern face. By their third or fourth year they came to understand that at least part of their fear was misplaced. They understood that he jealously guarded his privacy and revealed little of his sensitivity or sense of humor to those he didn't know well. They came to realize that it was because he was lost in thought that he often walked down the corridors of the hospital oblivious to the people who said hello to him.

When he stopped to listen to someone, he was politely attentive, his look direct

John Pekkanen—the health columnist of *The Washingtonian*—had many long conversations with Dr. Adkins and other principals of this story. He acknowledges the cooperation of all, particularly Dr. Adkins and family, who generously gave up many hours when every minute was precious.

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and steady. In normal conversations, his voice had a midwestern flatness to it. His hair was flecked with gray and he favored conservative suits and ties. He liked simplicity. He had three loves: his family, his work, and golf.

The Atlanta speech drained him further. He thought fleetingly that if the persistent fatigue was a sign of something serious he didn't want to know it now. He'd rather go to Atlanta and give his speech without finding out.

"Accentuating the Positive" is what he titled his address. He had handied about dozens of ideas with his wife before finally settling on it. The address traced the traditions and future of thoracic surgery and identified the problems it faced and offered ways to deal with them. Like many other significant moments in his professional life, it was one he shared with his family: Faith, his wife of more than thirty years, and three of his four sons, David, Mark, and Bill, went to Atlanta with him. Paul, his third son, a junior on the Bucknell basketball team, had a game to play and couldn't accompany them.

Dr. Adkins went to the round of cocktail parties, greeted many old friends, accepted congratulations for the speech. After their sons returned home, he and Faith stole away for five days with two old friends, Dr. and Mrs. George McGovern of Pittsburgh. Paul Adkins and George McGovern had known each other since their surgical residencies more than 25 years earlier. Now the two couples went to Ocean Reef on Key Largo, Florida, for sun and relaxation.

It was there that someone else noticed for the first time that Paul Adkins didn't appear to be well, didn't seem to have his usual drive.

"Why is Paul sleeping in the afternoon?" Dr. McGovern asked Faith Adkins. She said she wasn't sure but assumed it was because of his exhausting schedule recently: administrative chores at GW, surgical duties, teaching, medical rounds, speech-writing.

"It isn't like him," Dr. McGovern said.

Two weeks after Paul and Faith Adkins returned from Florida, he apparently came down with the flu. It was severe, but he was not alarmed by it; everyone caught the flu in February. Among the symptoms he experienced were nausea, fever, vomiting, and diarrhea. These passed after a few days. Coughing and fatigue persisted and Faith Adkins began to worry.

This fatigue was more bone-wearying than any he'd experienced before. It caused him to fall asleep soon after dinner, even though he had continued to nap in the afternoon. When he awoke in the morning he wanted to stay in bed, to get more sleep. It became difficult for him to go through routine surgery without feeling spent.

Dr. Paul Adkins and his wife Faith, with sons Paul and Bill, in the backyard of their Bethesda home on July 20, 1980. By then Dr. Adkins had a metastasis of the lung cancer on his upper lip and wore a small bandage to cover it.

His cough was low and rumbling, as if coming from deep inside his chest. He tried syrups and antibiotics, but the cough persisted. Finally he became so concerned that he quit smoking. When he told people he had quit, he felt that special pride one experiences after breaking a bad habit. Friends were supportive, and colleagues who had often remarked on the irony of a chest surgeon who smoked congratulated him. No longer would the length of a GW faculty meeting be calculated by how many ashtrays he filled.

The cough eased but hung on for weeks. It was particularly bad at night. His second son, Mark—a senior at the GW medical school, who often rode back and forth to the hospital with him—became sufficiently alarmed to tell one of the doctors at GW about the nighttime coughing. Then he confronted his father about it.

Ever since Mark had switched from being a Spanish major at the University of North Carolina to enroll in the premed program there, father and son had played games of medical one-upmanship with each other. The father, ever the teacher, would ask the son questions, usually about his own specialty, and Mark would respond in kind, asking his father questions about another area of medicine, perhaps something he had studied recently in anatomy. It was a form of good-natured kidding, father and son each taking a pride in the other's knowledge, each delighting in stumping the other.

Now, toward the middle of March, Mark asked a more pointed question:

"Do you know what the primary cause of a cough like that is?"

"Yes," Dr. Adkins answered. "Bronchitis."

"No," Mark said. "Tumors."

"Bronchitis," Dr. Adkins repeated, more adamantly.

Mark let it pass. But a few days later at the dinner table he said to his father: "You ought to have an X-ray."

There was no response, so Mark tried again.

"Yeah," Dr. Adkins finally said. "I'd better."

For as long as Mark could remember, he and his brothers had teased their parents about smoking in a vain effort to get them to stop, and now that he had asked about the cough and need for an X-ray he sensed for the first time that perhaps his father was actually afraid of discovering the truth about his health.

Dr. Adkins began to feel worse. One day when he was playing golf at Burning Tree, his caddy, a cheerful man nicknamed Fishcake, remarked that he looked ill and should see a doctor. Dr. Adkins's usual ten-handicap game was badly off.

Faith Adkins was increasingly concerned. Toward the end of March the two of them drove to Charlottesville, where Dr. Adkins spoke at the University of Virginia Medical School. During the drive he promised his wife that he would get a checkup.

A new bout of nausea and vomiting now hit him, coupled with the fatigue and coughing, and he was forced to do something that no one could remember him doing before. He called in sick.

Cindy Fisk, his secretary for a dozen years, had seen him growing weaker. Concerned, she now asked him how ill he was.

"Just cigarette withdrawal," he said.

She was grateful he'd quit. She always felt awkward when patients asked why there were ashtrays in the office of a

Dr. Adkins took the X-rays out of the folder and put them on his own lightbox. "What do you think of these?" Dr. Adkins asked. Dr. Aaron replied, "It looks like a pretty bad cancer of the lung." "They're mine," Dr. Adkins said.

chest surgeon. She avoided saying they were for the chest surgeon himself.

Dr. Benjamin Aaron, head of cardiac surgery at GW, was also concerned about Dr. Adkins's health. Dr. Aaron's office was next to Adkins's on the eighth floor of the Burns Memorial Building, at 23rd and Pennsylvania, Northwest, just across 23rd Street from the hospital. A Navy doctor for 22 years, he had come to GW a few months earlier. Lately he had begun to notice that Paul Adkins, the man who had hired him, had changed. He had become irritable and his face seemed to be fuller, as if he had gained weight. It didn't look like healthy weight.

Why Paul Adkins refused for so long to get a chest X-ray when he passed the outpatient X-ray laboratory every working day was probably due to a mix of dread and optimism—a suspicion that something might be terribly wrong was delicately balanced with a rationalized hope that it was minor and would quickly pass. But finally, when the fatigue and coughing grew undeniably worse, when he felt so dragged out for so long that he wanted to find answers himself rather than put up with feeling so awful, he asked Cindy Fisk to call X-ray for an appointment. She arranged one the same afternoon. It had been nearly three years since his last one.

He operated that morning, removing a tumor from a chest. In the afternoon, he picked up the X-ray slip from Cindy and took the elevator down to the X-ray lab on the first floor of the Burns Building. Enjoying one of the perquisites of his status, he walked into the X-ray room without waiting after handing the order slip to the receptionist.

The X-rays—front and side—took only seconds. While he was buttoning his shirt he glanced up at the technician clipping his X-rays on the lightbox attached to the wall.

He stopped buttoning his shirt, his eyes riveted on the lightbox. He moved in for a closer look. In the upper lobe of his right lung there was a large, grayish spot, a shadow. It was irregular in shape, about the size of an egg. In the lateral view he saw string-like tentacles that reached down into his lung, as if grabbing at it. Looking further, he saw a wide shadow in the mediastinum, on both sides of the trachea, where the lymph nodes that drain the lung are located. On the left side he noticed another shadow, just above the aortic arch.

He glanced at the clock above the lightbox. It was 3:10 PM Wednesday, April 2, 1980, a time and date he would never forget. As he took a final look at the X-rays, the thought hit him: "I am looking at my own obituary."

With all the control he could muster he slipped the X-rays back into a large manila folder and quietly walked out of the X-ray suite. Back in his office he began to pace. His mind swirled. Perhaps he had read too much into the X-rays. Perhaps his imagination had gotten the better of him. He needed a second opinion.

He walked next door to the office of Ben Aaron, who was doing some paperwork. "I've got something I want you to see," Dr. Adkins said. "Can you come into my office?" Ben Aaron followed him there. Dr. Adkins took the X-rays out of the folder and put them on his own lightbox.

"What do you think of these?"

Dr. Aaron, who had performed general chest surgery for years, replied quickly: "It looks like a pretty bad cancer of the lung."

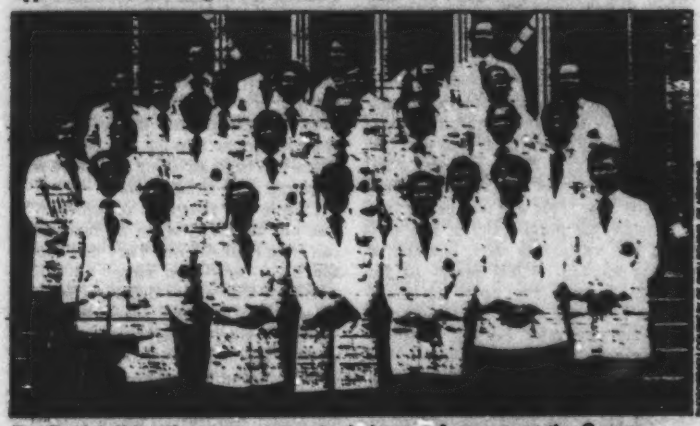
"They're mine," Paul Adkins said.

Dr. Aaron instinctively put a hand on Dr. Adkins's shoulder. They sat down and tried to regroup their thoughts. Both had diagnosed countless X-rays like these and realized what they had seen: cancer that was inoperable and terminal.

Dr. Aaron watched as Dr. Adkins began talking to himself and slamming his fist on his desk. "Damn," he kept repeating. His voice was anguished. To come this far, to reach this point, and now for this to happen.

Dr. Aaron tried to offer comfort. He would help in any way he could, he said. After Dr. Aaron left, Dr. Adkins began to pace again. Whenever he called patients into his office to give them news like what he'd just received, he tried to console them, to reassure them. He used words like "tumor" or "malignancy"—gentler words than "cancer"—because he wanted to soften the shock of such news as much as he could. But there was no reassuring doctor at hand to convince him that much could be done, that miracles happened. The news had hit him like a snake strike.

He wanted one more opinion—that of Dr. David Rockoff, head of diagnostic chest radiology at GW and an expert in



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Dr. Paul Adkins (front row, center), chairman of surgery at the George Washington University Medical School, was photographed in 1978 with GW surgery residents. Students voted him the "Golden Apple" award as outstanding teaching professor in 1975. To the left of Dr. Adkins is Dr. Stephen Pett, and at the far right in the second row is Dr. John Walsh—both had special relationships with Dr. Adkins.

reading X-rays. Dr. Adkins headed over to the main hospital.

David Rockoff had known Paul Adkins professionally for more than ten years. They often consulted on cases, Dr. Rockoff as the diagnostician and Dr. Adkins as the surgeon. They had a good relationship, exchanging jokes, talking freely, respecting each other's skill.

Now, as Dr. Rockoff, an energetic man in his late forties, emerged from the room where he had been performing a lung biopsy, he was surprised to find Dr. Adkins waiting outside wearing a grim expression and holding a manila envelope. The chief of surgery usually does not wait for people: he leaves messages for them to contact him. There was something he wanted Rockoff to see, he said, and Dr. Rockoff read the urgency in his voice. He invited Dr. Adkins to his office, on the first floor of the hospital, and on the way there he was jarred a second time when he told a small joke and Dr. Adkins, usually one to enjoy a joke, failed to laugh, failed even to acknowledge it.

They went to Dr. Rockoff's office. "What do you have?" he asked Dr. Adkins. Without preamble Dr. Adkins opened the envelope and handed over the X-rays. Dr. Rockoff turned to his lightbox and began clipping them on. This time Dr. Adkins, sagging in a chair, his face ashen, dropped all pretense that they were looking at the X-rays of an anonymous patient.

"Dave," he said, "it's finally caught up with me."

Dr. Rockoff looked at the X-rays. When he spoke, there was pain in his voice. "I don't know what to say to you. Do you want me to tell you what I see or do you want me to call somebody else?"

"I want you to tell me."

Dr. Rockoff went over his findings in detail. The most ominous was the spread of cancer from the right lung to the left and the involvement of the lymph nodes. The left main-stem bronchus, an air passageway from the trachea to the lung, was severely constricted by the tumor. This was the cause of his coughing. Dr. Adkins forced himself to listen to every word.

Dr. Rockoff had no illusions about the eventual outcome of the disease, but right now he was more concerned with the state of his friend's mind; such devastating news could unhinge anyone. He asked Dr. Adkins if he had told his family. He was prepared to leave his office and drive Dr. Adkins home.

Dr. Adkins said he was going to call Charlie Thompson, whom he considered his primary physician, and try to see him today. Later he would go home and tell Faith face to face. Dr. Rockoff felt a little relieved. When Dr. Adkins moved to leave, Dr. Rockoff patted him on the back and wished him well. The X-rays were left behind.

Dr. Paul Adkins in surgery: He was the president of the American Society of Thoracic Surgeons and he'd removed some 2,000 cancerous lungs, but he still couldn't bring himself to give up smoking.

Dr. Rockoff closed the thick oak door to his office, sat down, and looked at the X-rays one more time.

Their message was still plain. Paul Adkins would be lucky to be alive on Labor Day.

Charles Waters Thompson stands a shade under six feet tall, has a round, owlish face and a fringe of gray hair, and at 65 still strides with the erect carriage and talks with the bark of a Marine drill instructor. To say that his demeanor is crusty and his language salty is to say a Rolls-Royce is an expensive car. He is not above answering his office telephone thus: "Who the hell is this?"

He is an internist in private practice and has been a clinical professor of medicine at GW for more than thirty years. His father and grandfather also were associated with GW. There has been a Dr. Charles Thompson at GW since before the Civil War. This one will be the last.

Beneath the tough exterior is a sensitive and vulnerable man, unafraid to cry and unafraid to feel deeply for his patients, to make their cause his cause. He is a physician in the old tradition of healer and comforter. He will accept no obstacles that interfere with the welfare of his patients and he raises hell with anyone or anything that does. "If you do your job, sometimes you have to be a son of a bitch," he is fond of saying.

Once he was informed that a staff dermatologist was unwilling to come over from his office to see one of his patients at the hospital because it was getting late in the afternoon and he wanted to go home. Dr. Thompson picked up the telephone, called dermatology, and told whoever answered that people didn't get sick according to eight-hour workdays and it would be a very good idea if the dermatologist got his ass over here to see his patient. Immediately. The dermatologist showed up in five minutes.

He's not certain why he is what he is—why he speaks out so forcefully when others are often silent—but he thinks World War II had a lot to do with it. He was in the thick of the war during some of its fiercest fighting. A medical officer with the amphibious forces off the coast of Italy and, in 1943, in Salerno, he was awarded the Bronze Star for meritorious service under fire. That wartime experience, and a stint in Japan just after hostilities ended when he attended to prisoners of war, changed him in ways nothing else could. He saw too many people wounded and killed to accept complacency or to think that his mission in life was to do anything other than tend to people who needed him.

Late in the afternoon of April 2, he was not surprised when he received a call from Paul Adkins. They had known and liked each other since the 1950s. Although their styles differed, they got on well because they shared the same values in medicine: They both cared about teaching and their patients. Over the years Dr. Thompson had referred many of his patients to Dr. Adkins for surgery and had treated members of the Adkins family—including Paul Adkins occasionally. The day before, Paul had called to say he wasn't feeling well, and Dr. Thompson had urged him to come in for a checkup. When talk of an X-ray came up, Dr. Adkins said he was planning to

Paul threw his arms around her and held her tightly and told her the news without adornment, just as he'd gotten it. She knew he had been ill, but nothing had prepared her for this.

have one. Now he was calling to say he'd just had it.

"What does it show?" Dr. Thompson asked.

Paul Adkins answered: "I've got bilateral inoperable carcinoma of the lung."

"Come over right now," Dr. Thompson said.

Within minutes Dr. Adkins appeared at his door. Dr. Adkins sat down in a chair across from Dr. Thompson's desk and they began to talk. It was not so much a conversation about medicine as about the full range of consequences of the X-rays. Dr. Adkins remonstrated with himself for smoking, for not quitting twenty years earlier. At the same time he took some comfort in the fact that his house was paid for and his four sons pretty well launched. David, 29, the eldest, was a stockbroker here; Mark, 26, was in GW medical school; Paul, 21, was a junior at Bucknell; and Bill, 17, was a junior at the Landon School.

Charlie Thompson realized that his medical expertise was essential but that right now something else was needed. He began to open the door, ever so slightly, to the possibility of hope, to the need to fight back. Perhaps there had been no further spread, he said; they needed nuclear scans to determine that. Dr. Thompson palpated his neck and found no spread to the neck's lymph nodes, an encouraging sign. Soon Paul Adkins was speaking optimistically. Although Dr. Thompson never said that there was a way out, he encouraged his optimism.

Finally Dr. Thompson asked him who he wanted to take care of him.

"I want you to," he said. He was unequivocal. He knew how hard Charlie Thompson fought for his patients.

Dr. Adkins agreed when Dr. Thompson said that if he was in charge he would have to be in charge of everything, be the clearing point for all the medical treatments and tests that Dr. Adkins would undergo with specialists who might eventually be involved in the case. When he was a young physician Dr. Thompson had learned a bitter lesson. He had seen the eighteen-year-old daughter of a prominent doctor die needlessly because each of four specialists thought another had given her a vital medication. None had.

He would make certain nothing like that would happen in this case.

Faith and Paul had met in high school. Her best friend—a classmate at the Academy of Holy Names, an all-girls' school in Silver Spring—first pointed him out to her. He was tall, handsome, terribly shy, on the football and basketball teams and the colonel of the cadet corps at St. John's High School. He was also an exceptional student. (He ended up graduating first in his class, but when asked in later years how he had done academically he would simply say, "Pretty well.") She was attractive, delicate, and dark-haired, and had a quick intelligence.

He lived in the District and she in Silver Spring, but their homes were only six blocks apart. At the urging of her friend she boldly went up to him one day and asked if he would like to escort her to her high school dance. He smiled and accepted.

Their relationship was slow to kindle despite the mutual attraction of this young boy and girl, both from middle-class homes, both strong Catholics. After high school he went off to Johns Hopkins, where he'd been awarded a scholarship, where he played football and basketball and earned high academic honors. Faith stayed in DC to attend Trinity College, where she majored in biology.

He turned to premed for no other reason than it sounded interesting. It was only after he became exposed to the mysteries of the human body and to the ways medicine could intervene to cure disease that he became certain he wanted to pursue a medical career. Surgery especially appealed to him because it was so direct, so clean in curing disease.

They corresponded while he was an undergraduate at Hopkins—on an accelerated wartime program that included summer school—and later while he studied at the school of medicine there. On rare weekends when he came home, they went out. After college she began work as a biologist at NIH, participating in early chemotherapy experiments on mice.

They were married in 1949 when he was doing his general-surgery residency at Hopkins and being paid all of $16.66 a month, which was supplemented by her wages from the Marine Hospital in Baltimore, where she had asked to be transferred. He also supplemented their income by selling his blood at $25 a pint. Their phone was plugged into the hospital switchboard and their life in those early years was punctuated by his being summoned at all hours to go to the hospital.

Their first son, David, was born in 1951 while his father was serving in the Army Medical Corps in the Far East, and when Dr. Adkins was discharged in 1952 the family returned to Washington. While in the Army he had become aware that few surgeons seemed to know much about chest surgery. He wanted it to be his specialty.

He entered the thoracic-surgery residency program at GW and they moved into an apartment in Park Fairfax. They had little money, but they did have a stylish old Buick convertible. She gave up her own career and settled in to becoming a wife and mother, spending her spare time tending her garden and playing the piano. Later, because he loved it so much and they wanted to be together more, she took up golf.

Their marriage underwent the stresses all marriages do. He was away often and there were the normal problems of raising four very robust and individualistic sons. But they shared an abiding affection for each other and their sons. They traveled together as often as they could, entertained close friends, attended the Little Flower Church every Sunday after moving to Bethesda in 1959. And every day of their life together he would say to her, "Have I told you today how much I love you?" She never tired of hearing it.

Faith Adkins was surprised that Wednesday afternoon when she saw her husband's blue Cutlass speed up Kirkwood Drive and turn quickly into their driveway. It was only 4:55, and he usually arrived home around 6:30 or 7. She noticed that he appeared to be hurrying as he came up the steps.

He threw his arms around her and held her tightly and told her the news without adornment, just as he'd gotten it. She knew he had been ill, but nothing had prepared her for this.

They walked to the den and talked, and from that moment on Faith Adkins,

a woman of unusual strength and character, never had any illusions about what would happen to her husband. She had too often heard the words "inoperable carcinoma of the lung" to allow any false hope to creep into her thoughts.

She wept and realized that from now on he would need her as he had never needed her before.

All the Adkins children were told of their father's illness immediately, except Mark, who was in New York City trying to find an apartment. He had been accepted into the prestigious surgical residency program at New York University and was due to report there July 1.

When Mark returned home the following night he was exhausted and depressed from seeking the next-to-impossible—an affordable, comfortable apartment in New York City.

He began complaining as soon as he got home. He walked into his parents' room and was letting off steam when his father quietly said to him: "Mark, I've got some bad news."

He told his father that no news was as bad as the news he'd just gotten in New York. Dr. Adkins interrupted to tell him he'd had a chest X-ray that showed a lesion in his upper right lung.

What kind of lesion?

His father began to tick off the possibilities, all of them extremely remote except one: lung cancer.

The next morning Mark went to his father's office. It was small and spare. Framed diplomas hung behind his desk, and pictures of himself with some of his closest friends—thoracic surgeons from all over the country—hung in the short hall outside. Once, when someone remarked on the small size of his office considering the position he held at GW, he said if he were really efficient he wouldn't even need a desk.

Mark visited there often to read Dr. Adkins's medical texts. As he sat there this morning his father came in and silently took his customary seat behind the desk. They said very little to each other. Both by nature were quiet and thoughtful. They often spent the time driving to and from the hospital in silence.

Mark now moved from the sofa and sat in the chair directly in front of his father's desk. "What you told me last night really upset me," he said. "Tell me it's a bad dream I had."

His father answered softly: "I wish I could."

The weekend following his X-ray Dr. Adkins noticed that he couldn't button his size-fifteen collar. His neck had enlarged and his face was obviously fuller and rounder when he looked at it in the mirror. He diagnosed himself: He had vena caval obstruction.

The vena cava is the major vein carrying blood back to the heart. The tumor was pinching it, closing it off so all the blood could not return, causing the swelling in his neck and face. He was alarmed at how quickly it had happened, and alarmed at what it might mean.

He had scheduled himself to be admitted at GW on Monday, April 7, for the biopsy, and now treatment would have to include the vena-cava problem. In all likelihood radiation therapy could reduce the obstruction.

On Monday morning, the day after Easter, a cloudy day threatening rain, Dr. Adkins went to the hospital just as he had done every other workday for the past thirty years. But this time he went as a patient.

Mark Adkins, on general-surgery duty on the sixth floor, watched at a distance as his father, carrying suitcase and wearing street clothes, walked toward his room. His head and neck were swollen further.

"What you told me last night really upset me," Mark said to his father. "Tell me it's a bad dream I had."

Mark felt very uneasy about watching his father admit himself to the thoracic-surgery wing he had dominated for ten years as chairman of surgery. Dr. Adkins felt no such uneasiness, because he liked and trusted the people he'd hired.

The vena-cava problem introduced a new serious risk. General anesthesia, ordinarily used during biopsies, causes swelling of the brain. In Dr. Adkins's case, there already had been considerable swelling, so the use of general anesthesia posed a risk of permanent brain injury.

Dr. Adkins had asked Ben Aaron to perform the biopsy—to go into the chest if necessary—to get a slice of tissue so pathology could determine if it was malignant and pinpoint its cell type.

Because of the high risk of anesthesia, Dr. Aaron began palpating the neck. No enlargement of the lymph nodes had been detected by Charlie Thompson five days earlier, but now Aaron found some. This was an encouraging sign for surgery because it meant they could just take a slice out of the node and not open the chest, thereby avoiding general anesthesia, but Aaron recognized it was a bad sign for Dr. Adkins's prognosis. For a node to have enlarged to such an extent meant the cancer was spreading fast.

The biopsy was scheduled for Tuesday, April 8, and the operating-room supervisor closed off all the windows to keep away onlookers. The word of Dr. Adkins's illness had swept through GW like a grass fire.

Dr. Adkins was tranquilized but conscious as Dr. Aaron began his cut near the collarbone. They exchanged few words. Dr. Aaron wanted to make certain he was causing only minimal pain, and Dr. Adkins assured him he felt very little.

Dr. Aaron cut into a nest of lymph nodes and found an ominously large one. The node was firm and whitish, surrounded by supporting tissue and apparently without blood vessels. It bulged when Aaron cut into it to get a slice. Dr. Aaron knew immediately that he was cutting into a malignancy. "Anything that looks like that and cuts like that, in that region of the body, is cancer," he said later.

The biopsy took thirty minutes. A few minutes later the preliminary report from pathology came back. It was an anaplastic carcinoma. Cancer.

Mark Adkins had waited outside the operating room. When the biopsy was over he followed his father down to the recovery room and they spoke briefly. Mark asked him how he was and he said pretty well, that it had been fairly easy.

Moments later Mark met Dr. Aaron in the hall outside the operating room and they walked to a nearby alcove, sat down, and talked. Mark had held out hope, against all reason, that it might not be malignant. Now he asked Dr. Aaron how long his father had. He hoped for five years—that was a figure he'd often heard associated with cancer survival. Aaron told him that, in his experience, people with this disease in this stage lived for only a few months.

Mark thanked him for his candor and went back to work.

Paul Adkins once confided to a friend that he never intended to intimidate his residents and other members of the hospital staff, that this was simply a result of his personality.

Sometimes, usually after a series of incidents rather than a single incident, his temper could get the best of him. He once hurled a ballpoint pen across his office and a young medical resident had to duck to avoid it. He wasn't aiming at the resident; he wasn't even mad at him.

Notwithstanding the reputation he had earned as an unyielding taskmaster—especially when it came to surgery—the single most difficult thing he had to do as chairman of surgery was to fire people. He did it only three times in the ten

years he was chairman, and each firing was painful for him.

He realized that many people wrongly imagined him to be cold and aloof. He didn't see much he could do to change that. He wasn't a backslapper or a charmer; he had to say what he thought, and he would not put up a pleasant facade to persuade people otherwise.

He was extremely sensitive to personal slights. They could darken his mood and cause him to withdraw and become silent. He took things very personally, and he couldn't change that, either. The hard outer shell was there because his profession demanded it. You don't train Marines or young doctors effectively by being kind.

But he was a strongly ethical man who cared about each of his patients. When he was still performing cardiac surgery in the early 1960s he received a call from the local chapter of the American Heart Association, asking him to suggest the name of a young patient, someone who could be shown off at a fundraising dinner. Dr. Adkins gave them the name of an eleven-year-old girl whom he had surgically cured of a complex heart defect. The heart association was pleased until they learned the girl was black. Thanks anyway, they said, we'll find someone else. Dr. Adkins vowed at that point never again to have anything to do with the heart association, and he didn't.

And there were many moments when he was extremely kind. Three years earlier Dr. Stephen Pett, a young GW surgeon trained by Dr. Adkins, lost his first patient on the operating table.

The patient, a man admitted late at night with an aortic aneurysm, hemorrhaged. Try as he might, Steve Pett could not stem the bleeding from the large, pulsating artery fast enough to save him.

In the stark operating room, at midnight, as he was pronouncing the man dead, Dr. Pett looked up to see Dr. Adkins, who had been summoned from his home. Steve Pett was in a mood of self-recrimination, feeling a desperate sense of failure. Dr. Adkins walked over to him and spoke quietly, reassuringly, telling him that he hadn't failed, that in the business of surgery, deaths must be expected and that hemorrhagic death was always lurking in the operating room.

Dr. Adkins then suggested they go on rounds, to get Steve's mind off what had happened, and to remind him of the patients now recovering, the patients they'd helped.

This was a tender side that Dr. Adkins seldom displayed. So in his hospital room that night, only a few hours after the biopsy confirmed what he already knew, he was overwhelmed with the number of visitors. They came from all over the hospital: orderlies, nurses, residents, friends, other faculty. They all came to cheer him up, to wish him well, to tell him they were thinking about him and were pulling for him.

Several of his surgical residents brought a bottle of Johnnie Walker scotch and poured drinks all around. Old stories were told, jokes exchanged.

He finally grew exhausted, but he had been moved and touched.

His melancholy began to ease. He hadn't realized that so many people had so much affection for him.

During his five-day hospital stay in April, two encouraging medical findings allowed Dr. Paul Adkins to begin to hope again. The bone, liver, and head scans, during which radioactive isotopes are injected into the vein and reveal metastatic disease, indicated that there was no further spread of the tumor to other sites in his body. The brain, a likely place for lung cancer to spread to, was a special concern. But no cancer was detected there. Dr. Thompson, who visited him at least once a day, continued to encourage hope in his patient.

He had known the risks of smoking but gambled on genetics. His parents were both heavy smokers and long-lived.

Dr. Adkins knew cancer could spread through the lymphatic system or the blood stream or through both. He realized there was already lymphatic spread but he was encouraged—more so than his condition warranted—that his blood stream had not spread the malignancy in any detectable way. If it spread in the blood stream, he knew his time would be very short.

He was encouraged further when radiation therapy to his chest region—begun the same day as his biopsy—reduced the tumor enough to eliminate the vena caval obstruction. His neck—at one point two inches larger than normal—and his face both returned to normal size. The radiation therapy would be continued for two weeks, be stopped, be resumed again in May, and be completed in June.

A more detailed pathology report now indicated that he had large-cell anaplastic carcinoma of apparent glandular origin, a type of lung cancer often associated with cigarette smoking. The information might be useful should he ever undergo chemotherapy, a prospect he was considering—and dreading. He had never had any doubt that smoking was the cause of his cancer. He was conversant with the theory of how it occurs—an irritation of the lung cells, caused by elements in the cigarette smoke, in turn causes one of the cells to slowly transform into a malignant cell, which keeps dividing and redividing until it has created a tumor mass.

He had known the risks of smoking but gambled on genetics. Both his parents had been heavy smokers. His father lived into his late eighties before dying of a disease unrelated to smoking. His mother, now in her early nineties and somewhat senile, was at a Bethesda nursing home—still, he said, "smoking like a chimney." He brought her a carton of cigarettes when he visited her every week or two. He had not spoken to her of his disease, nor would he.

He told his family when they visited him in the hospital that week that he was encouraged, that things could be a lot worse, that he might beat it. He was also feeling stronger. For the first few days after the initial X-rays he had been obsessed with his disease every waking moment. Now he detected a small change. He found himself able to think about other things; no longer did he lie awake in bed all night berating himself for his failure to stop smoking years earlier. Always disciplined, he had willed himself to overcome such feelings of self-pity and recrimination and to live from day to day. It was all he could do.

Nor did he mentally thrash himself for not having had a chest X-ray sooner, back when the first signs indicated that all was not well. He knew what all experts in lung cancer know, that by the time there are symptoms of the disease it is usually too late to stop its spread. He also knew that ninety percent of the people who are diagnosed as having inoperable lung cancer are dead within six months. Ten percent live as much as sixteen months longer. He chose to put himself in with the ten percent.

He was the only doctor who did.

Physicians in the upper echelons of their specialty are part of an elite national network, and they are often in contact with colleagues around the country to exchange information. It was not long before word of Dr. Adkins's disease spread among his colleagues. Only a few days after he was released from GW Hospital, while he recuperated at home, he received a call from Dr. Edward Beattie, the chief of thoracic surgery at Sloan-Kettering Memorial Hospital for Cancer and Allied Diseases in Manhattan.

Of all the institutions in the country involved in cancer treatment, Memorial offers the most radical procedures. (Often it is up against incurable cancers.) Severe and even mutilating surgery and ex-

tremely high doses of chemotherapy are often attempted in the hope of extending life. Sometimes life is extended. But the quality of the extended life is a major point of contention. Is there any benefit to extending life of a terminal cancer patient three or six months if he or she is in terrible pain, unable to get out of bed, unable to comprehend what is happening?

Dr. Beattie knew of Dr. Adkins's illness and, being an old associate, offered his condolences and then offered his expertise if Dr. Adkins would come up to Memorial immediately. By this time Dr. Adkins had begun to feel a little stronger. He had just gotten over his first bout of nausea, a side effect of his radiation therapy and perhaps of his disease as well. He said that he was planning to go to San Francisco for the annual meeting of the American Association for Thoracic Surgery and suggested they meet out there.

Dr. Adkins went to San Francisco—the meeting was held from April 28 to April 30—primarily to prove to himself that he could live a normal life. Mrs. Adkins accompanied him. They discovered that virtually everyone there knew of his illness.

Several physician friends offered to help Dr. Adkins in any way they could, and Dr. Beattie was the most insistent. Dr. Adkins promised to let him examine his case.

The next week Dr. Beattie telephoned Dr. Adkins in Washington and implored him to come to New York immediately so specialists at Memorial could examine him and determine what they could do. It was a Wednesday and Dr. Adkins, who felt he was being pressured in a friendly but persistent manner, said he would be unable to come up immediately but he could make it on Saturday. He agreed to send his X-rays up beforehand.

In early May Dr. Adkins had started to become increasingly short-tempered; he seemed to become annoyed over minor incidents. The anger seemed general, not aimed at anyone or anything but rather at his fate.

On the day Dr. Beattie called, Dr. Adkins seemed especially irritable. Later that morning he called out to Cindy Fisk, his secretary, to find out if she had collected his X-rays to mail to Memorial and to another physician friend, Dr. Cliff Mountain, at M.D. Anderson Hospital in Houston. She had spent much of the morning collecting and packing the films and she had them ready. She knew he was irritable. She told him she was just about to go out and mail them.

"I'll be dead before you get this done," he yelled.

On Friday afternoon, the day before he was scheduled to go to Memorial, he underwent a CT (computerized tomography) scan, a cross-sectional X-ray picture of the body. It showed the precise size, depth, and location of his tumor.

It was late in the day, nearing six o'clock, by the time the scans were finished. As Dr. David Rockoff examined them he noticed the left main stem bronchus was now showing signs of being squeezed even more by the tumor. He remembered the time Dr. Adkins had come to his office with the original X-ray. He had wanted to know every detail then, every observation Dr. Rockoff could make about his case.

Now Dr. Adkins stood silently putting on his tie in a corner of the scan room as Dr. Rockoff studied the X-ray images on the computer visual display console.

It was obvious to Dr. Rockoff that Dr. Adkins no longer wanted to look clinically at his own case.

"Paul," he called, "you're welcome to come over here and look at these."

Dr. Adkins said, "No, I'll just stand here."

It was obvious to Dr. Rockoff that Paul Adkins no longer wanted to look at his own case clinically. He was compelled to pull back from this knowledge if he was to have any chance at all of hope.

Dr. Rockoff realized his role wasn't to give false hope, but he knew it wasn't to destroy hope, either. If Paul ever wants to know, he thought, he will ask.

"Here they are," he said as he handed Dr. Adkins the envelope with the copies of the CT scans. "Good luck in New York."

Paul and Faith Adkins took the Eastern shuttle to New York on a bright, sunny Saturday morning in early May and met with Dr. Beattie and his staff. The X-rays and CT scans were examined and the options were outlined. They would start him on a regimen of very high doses of chemotherapy, a combination of cisplatinum, adriamycin, and vindesine. They explained the likely side effects. Mrs. Adkins became horrified at the thought of them—prolonged nausea, hair loss, extreme weakness, and no guarantee of a cure.

Dr. Beattie wanted to operate on Dr. Adkins, to perform a thoracotomy, which would involve opening the whole chest. Dr. Beattie proposed to enter from the back and "debulk" the tumor, a process in which as much of the tumor as possible is surgically removed. He then proposed to implant radioactive pellets that would continue to irradiate the tumors from within.

The prospect was frightening. The combined effects of the chemotherapy and surgery would devastate him. If it had offered even a forty-percent chance of two or three more years he would have taken it. But it did not, and he knew it did not.

The doctors at Memorial were insistent. They claimed that they had achieved an average remission time of twenty months. But Dr. Adkins didn't like the surgical approach to thoracotomy at Memorial. Why cut from the back, as they proposed, rather than perform a sternal split, which would give far greater access to the mid-portion of the chest, as well as to the right and left lung? He realized if he agreed to the operation he would never presume to tell them how to do it, but all in all he didn't think their surgical approach was sound.

He told them he'd think about it.

He discussed it with his wife, Dr. Thompson, and a number of colleagues at GW and at other medical centers around the country. The surgery was highly controversial, as was the implantation of the radon seeds. Their radioactive emission was uncertain so it would be difficult to determine how successfully the tumor was being irradiated. Mrs. Adkins thought the treatment at Memorial would be too much for her husband.

He also talked with Dr. Ben Aaron about it. Dr. Aaron echoed the advice of many other doctors. The procedure would make him sick and miserable, and he didn't think Dr. Adkins deserved that. Nor did Dr. Cliff Mountain of M.D. Anderson Hospital, who had carefully examined Dr. Adkins's X-rays.

Dr. Adkins and Dr. Thompson talked about advantages and disadvantages of staying at GW, and finally Dr. Adkins decided to remain. He would be treated there despite any difficulties that decision might create, and he wouldn't try anything exotic or experimental. He'd take the same treatment he'd recommend to any patient: He'd stick with straight radiation therapy—take it to the limit of 6,000 rads—and if his condition ever warranted it (and the specter of this scared him more and more), he would take chemotherapy. But for now there was no detectable metastases to other parts of his body, and he took solace in that. He would remain where he was comfortable, among people he trusted, and take it a day at a time.

Friends urged him to take a vacation—go to Tahiti, Paris, wherever. But he had no wish to leave. Being away from home and all that was familiar to him would only focus his mind on his disease. He

didn't want that. He wanted to keep working, to maintain his routine as much as he could, to live a life as normal as possible. He asked a longtime fellow surgeon, Dr. Neofytos (Newt) Tsangaris, to be an associate chairman and to help him with administrative chores. Dr. Tsangaris, a large, friendly man, agreed. Dr. Adkins had no intention of relinquishing his duties altogether. He would continue to come to his office every day. That was where he wanted to be.

Some physicians make their mark by developing a surgical technique, some by curing a disease, some by self-promotion. Paul Adkins's reputation was made in no small part by the many reforms he brought to the board examination process in thoracic surgery and by the scores of young doctors he sent out into the world. He saw to it that these doctors understood how and when to operate, how to take care of patients.

Training young doctors for surgery is among the most delicate of tasks. A line must be carefully drawn so they can learn by experience while at the same time the welfare of their patients is protected. Dr. Adkins's technique was to allow young surgeons as much latitude as possible, allow them to learn by experience, and then, after they'd struggled through a procedure, show them how it should be done. "Neat but not gaudy," he'd remark after an especially elegant surgical procedure. Students voted him the "Golden Apple" award as outstanding teaching professor in 1975.

He stressed ethics to such an extent that his residents would never tell him when they were invited out to lunch by a salesman from a drug company. They knew he would consider it bad form, an unholy mixing of private interest with medicine. He refused to allow any representatives of commercial medical firms or physicians they sponsored to speak at "Grand Rounds," the lecture series held at all teaching hospitals. He would rather have paid for his own speaker than have a commercial firm provide one for free.

He could at any time in his career have left academic medicine, moved into private practice, and probably quadrupled his income. Although he earned a good salary, he was supporting a large family, sending or having sent four sons through private school and college, and the financial temptations were always present. He never gave them a second thought. He was a man satisfied to be what and where he was, and the fact that he earned considerably less than he could have was more than compensated for by his satisfaction in the quality people his training program turned out.

Of the scores of young physicians he trained over the years, Dr. Robert Corso was one of the few for whom Dr. Adkins foresaw eventual stardom. Bright, thoughtful, academically sound, and gifted in surgery, Dr. Corso had everything needed to achieve a brilliant career in academic medicine. They first met in 1964 when Corso was a first-year GW medical student. He selected Dr. Adkins as his faculty adviser.

From early in their relationship Corso was able to lift Dr. Adkins's veil, to see that this man who intimidated so many students and residents was sensitive, compassionate, shy. He greatly admired Dr. Adkins's mind, which he found eminently logical and penetrating. Other residents, noting the rapport, would ask

"Neat but not gaudy," Dr. Adkins would remark after an especially elegant surgical procedure.

Dr. Corso, who also spent his surgical residency at GW, to act as mediator with the boss.

Dr. Adkins guided Dr. Corso toward the paths of recognition in academic medicine. He urged him to publish and pointed out the medical journals where he should place his work. Their relationship became almost father-son. Theirs was a friendship that promised to endure for life.

But after he finished his thoracic-surgery residency, Dr. Corso steadily grew disillusioned with academic medicine and with the limited opportunities he foresaw at GW for his major interest—heart surgery. In early 1977 he decided to leave academic medicine. He knew the break with his mentor would be hard, that Dr. Adkins would take it personally, that no amount of explaining would ease the pain.

It took him three weeks to work up the nerve to tell Dr. Adkins that after all these years together he was leaving, had already accepted a position as cardiac surgeon at the Washington Hospital Center. When Dr. Corso finally broke it to him, in March 1977, Dr. Adkins was silent, but that night he went home and, for one of the few times in his adult life, wept.

Their relationship was never again what it had been, but over the next months they spoke, often warmly, and once at a convention they went out for a drink and Dr. Adkins told him he was welcome at GW if he ever wanted to give academic medicine a try again.

Dr. Corso was pleased but refused. He had found in the practice of heart surgery something that excited him too much to leave it for anything else.

Last spring Dr. Corso was driving near his Bethesda home in his new sports car when out of the corner of his eye he saw Dr. Adkins's car backing out of the parking area at Burning Tree. He pulled up next to his old boss's car and waved. Dr. Adkins smiled weakly. Because he was dressed in his driving hat and goggles Dr. Corso thought Dr. Adkins didn't recognize him. He took them off and said, "It's me."

There was no snappy remark, nothing like "Why the hell are you spending all your money on a car like that?" Just that same weak smile as Dr. Adkins backed out and drove away.

Dr. Corso knew something was wrong. That night a resident called him and told him Dr. Adkins had just had an X-ray taken.

Dr. Corso telephoned Dr. Adkins and asked if he would like to talk.

They met in Dr. Adkins's office in the late spring. Each drank a glass of scotch and they talked easily. Dr. Adkins spoke of his disease, what he planned to do, how he was facing it.

Dr. Corso asked him if he wanted any help near the end if the pain became unbearable. Dr. Corso said if nobody else would put him out of his misery, he would be willing to perform this final gesture of friendship. He would have him admitted wherever necessary in order to do this.

Dr. Adkins thanked him but said he couldn't do that. His religion prevented it.

They parted as friends.

Later that summer another friend asked Dr. Adkins about suicide. PBS television had just run a show about a woman named Jo Roman, who, after she was diagnosed as having breast cancer, decided to kill herself rather than face the consequences of the disease and treatment.

"How could she do that?" Dr. Adkins asked the friend. "Why would anyone want to do that?" He'd taken care of hundreds of terminal patients and he could remember only one, a man with lung cancer, who actually killed himself.

"I don't consider suicide a viable choice," he said.

Toward the end of May Dr. Adkins was still feeling some effects of the nausea induced by his radiation therapy. The nausea was apparently brought on when malignant and normal cells were broken down by the high doses of radiation and released toxins. The extensive cellular damage also brought on fatigue. But all in all he felt he was picking up a bit, felt he had a reasonable amount of stamina. He remarked that now that he knew how

debilitating radiation therapy could be, he would never again blithely recommend it to his patients. Some had told him how badly it made them feel but he had never fully appreciated that. He'd listened to them but never really heard.

His weight loss had by now become noticeable. He was down from his customary 172 pounds to around 150. Even though his nausea was not acute, he had little appetite. The cancer was compounding the weight loss because of the very high metabolic rate of malignant cells. His clothes began to hang on him. He hated it when people told him he looked good. He knew he didn't.

On May 23 his son Mark was to be graduated from the GW medical school. It was the culmination of a long ordeal for Mark, the first big hurdle in his medical education, and the fulfillment of an unspoken wish of his father. Dr. Adkins had never pressured any of his sons to go into medicine or any other field. He took enormous pride in all of them. On many Saturday mornings at the hospital, when the pace was slower than usual, he would look at the sports pages with his residents and read about the exploits of his sons, all of whom were athletes at Landon School. David, Mark, and Paul were quarterbacks. Paul, now at Bucknell, won the Touchdown Club's 1977 "Tommie" award as the prep football player of the year here. Bill, now a senior at Landon, is the biggest of the sons and a defensive lineman on the football team.

The GW graduation ceremonies were held in Lisner Auditorium on a sunny, warm Friday afternoon. Dr. Adkins had begun to appreciate little things much more since he had learned of his illness: good weather, bright flowers, the sound of a soft breeze, a pleasant dinner. Once taken for granted, they now were savored.

"Mark Adkins" was the first name in the graduating class, and when it was called Dr. Adkins, sitting on the stage dressed in academic cap and gown, burst into a luminous and proud smile. Mark walked to the podium and accepted his diploma.

When Dr. Adkins marched out in the academic procession at the end of the ceremonies he noticed a familiar figure standing quietly near the aisle. It was Dr. Milton (Bud) Gusack, his old and trusted medical colleague. They went all the way back to Johns Hopkins, where they were both in medical training during the 1940s.

Dr. Adkins knew why Bud Gusack was there and why he was beaming. His son, also named Mark, was graduating today as well. Dr. Adkins edged toward him and extended his hand. They shook warmly while the procession waited.

"Congratulations, Bud," Dr. Adkins said as they embraced.

Bud Gusack tried to answer but he was too moved to speak.

By early June, although his appetite was still slack and his energy diminished, Dr. Adkins felt more optimistic that he would fall into the lucky ten percent, that he might live a reasonably normal life for at least another year, perhaps longer. He played golf on weekends and fulfilled many of his duties at the hospital, including some surgery.

On a Monday in early June, walking out of a meeting his spirits high, he approached David Rockoff.

"Dave," he asked, "did you know that radiation therapy is good for golf?"

Dr. Rockoff smiled and asked what he meant.

The promise of early July grew in his mind until he was virtually consumed by it. He wanted "to have one more good summer."

He told him that at Burning Tree the day before he'd shot a 76.

Dr. Adkins now began a new experimental treatment called thymosin, which had been co-discovered by Dr. Allan Goldstein, a University of Texas biochemist now teaching at GW. Thymosin was designed as an immunity enhancer and was believed to have potential benefits for cancer patients because both the disease and the radiation and chemotherapy treatments diminish the body's immune response. Thymosin might help in fighting the cancer as well as other infections.

The irony was that in the early winter of 1979 Dr. Adkins had been selected by the National Cancer Institute to be one of a group of clinician researchers allowed to use thymosin experimentally on lung-cancer patients.

He now became the first patient in his own experiment.

On June 13 the maximum radiation dosage—6,000 rads—was finally reached in Dr. Adkins's treatment; he could receive no more radiation to his chest region. This occurred on a Friday. By the following Sunday the lingering mild nausea he had been experiencing gave way to overwhelming nausea. He couldn't keep any solids down and felt so exhausted that he didn't go into his office for an entire week. Ginger ale was the only nourishment he could keep down.

Concurrently he developed esophagitis, an inflammation of the esophagus that causes a burning sensation and pain. Esophagitis is also caused by radiation therapy. At one point he took aspirin and suddenly felt a burning, crushing pain in the middle of his chest. Although the pain didn't radiate to his neck or arms, he feared he might be having a heart attack.

Ever the scientist, he decided a couple of hours later to take another aspirin. He felt an identical pain and realized it was the combination of aspirin and esophagitis that caused it. He was relieved to learn that he didn't have heart problems to add to his list of ailments.

He spent the entire week in bed, reading and sleeping, as if hit with the most virulent of stomach flus. Throughout June he had been setting July 1 as his target date for a new beginning, and despite the setback he continued to look to it that way. He thought by then the effects of his radiation treatment would have diminished to the point that he could eat more and resume many of the surgical teaching and administrative responsibilities he'd had to ignore. The promise of early July grew in his mind until he was virtually consumed by it. He wanted to work, to operate, to teach, to play golf—"to have one more good summer."

But two new problems began to emerge, quietly at first. He noticed a blister on his lip. He examined it and wondered why it seemed to be enlarging. He also felt back pain for the first time. He thought the latter was probably caused by muscle spasms brought on by his coughing.

Concerned about his father's weight loss and relative lack of appetite, Mark Adkins bought him nutritional supplements. Dr. Adkins thought they tasted awful. Eventually they found one, Meritene, that he could tolerate. It was mixed with milk. When Faith Adkins mixed it for him at home she secretly added eggs and cream to get more nutrition and calories into him. She was distressed at seeing him become so thin.

Toward the end of June, Mark prepared to leave Washington to begin his surgical residency at NYU in Manhattan. He had found a small apartment on East 72nd Street.

The family had a big dinner that night, and when it was over Mark went up to the bedroom where his father was resting and told him he was apprehensive about leaving the security of home and joining an extremely competitive surgical residency program. His father reassured him. He said all young doctors are frightened by the prospect of residency.

They talked easily. Both realized, but never said, that Mark would be working hard and he would not be able to come

home for a while. They knew this might be the last time they would talk face to face.

They both felt a deep sadness, but before the moment could become maudlin—something Dr. Adkins could never abide—they said their good-byes. Mark was soon heading for New York. Now only Paul and Bill, the two youngest sons, were living at home. David lived in an apartment on Bradley Boulevard and called or visited his parents often, more often than he had in the past.

On June 27 Dr. Adkins underwent another bone and liver scan, the best way to determine if the cancer had spread. The results would determine if he should begin chemotherapy. His opinion of chemotherapy had not changed. He would take it only as a last resort. He dreaded it in some respects more than death itself. He had seen its effects too often on too many patients.

The scans were negative; there was no detectable spread of the malignancy through the bloodstream. He was greatly relieved.

But two other problems kept nagging him. The "blister" on his lip didn't look like a blister—and it was definitely enlarging. His back also kept aching. After dinner Faith Adkins would gently massage away the pain and tightness. And as she moved her hands over his back she was saddened beyond telling to see her husband's once-strong body wasting away in front of her.

The first week of July, which he had hoped would mark a new beginning, began badly.

The lesion on his upper lip looked worse. He had applied a topical ointment, but it did no good and he grew increasingly worried. He picked at it, examined it, feared it. He visited Dr. Thompson, who told him it didn't feel like a blister or a cold sore. He didn't want to alarm Dr. Adkins but said it should be looked at by dermatology.

At his office on Wednesday, July 2, Dr. Adkins called Dr. Mervyn Elgart, a friend and chairman of the dermatology department at GW. He explained that he had something on his face he wanted looked at. Dr. Elgart invited him to come right up to his office, on the eleventh floor of the Burns building.

Examining the small reddish bump, Dr. Elgart at first suspected that it was a form of skin cancer, worrisome but something that could be dealt with. He surgically removed a wedge from the lesion's center for a biopsy and told Dr. Adkins he would have the results later that day.

That afternoon Carol Martin, a technician in Dr. Elgart's office, suggested that he might want to examine Dr. Adkins's biopsy himself, because it looked bad. Examining the tissue through the microscope, Dr. Elgart saw what Carol Martin was talking about. There were large dark cells beneath the epidermis—not on it as would have been the case in primary skin cancer. He had a sinking feeling that he was looking at metastatic disease, that the cancer was now spreading through Dr. Adkins's bloodstream.

He immediately called pathology and sent one of his residents to match the skin biopsy slides against the slides taken from the lymph-node biopsy in April.

An identical match.

Three hours after taking the slice out, Dr. Elgart went down to Dr. Adkins's office. Dr. Adkins was sitting at his desk.

"Paul, I've got some bad news for you. The lip looks metastatic."

Dr. Adkins observed that it must have spread, thanked Dr. Elgart, and then fell silent.

His patients had taught him how to face the final crisis with strength and forbearance, and he now resolved to do the same thing.

After Dr. Elgart left, Dr. Adkins sat alone in his office turning the news over in his mind. It forced his hand on the chemotherapy, but more than that it meant the end of hope. He had not the slightest doubt that if the cancer had spread to his lip it was spreading everywhere, that malignant cells were starting new tumors, mounting new assaults, throughout his body. He could no longer remain in the soft embrace of illusion. Death was moving in, and he didn't have much time. He called Charlie Thompson. They talked only briefly. There was not much to say.

Paul Adkins did not sleep well that night, nor for the next few nights. He lay in bed thinking that he now had to live this ordeal out without flinching. His patients had taught him that; in a sense they had given him much more than he had given them. They had taught him how to face the final crisis with strength and forbearance, and he now resolved to do the same thing.

On Sunday afternoon of the Fourth of July weekend he experienced shortness of breath for the first time. He noticed it just walking up the stairs. He thought it possibly due to radiation pneumonitis, a buildup of fluid in the lungs caused by the long-term radiation therapy. Or it might be caused by loss of lung capacity from the disease, or an infection of some kind. He focused on the pneumonitis. It was a more comforting diagnosis.

He had a severe coughing spell Sunday evening, and coupled with the shortness of breath it made it difficult for him to breathe. Faith Adkins, hearing him coughing and struggling for breath, became alarmed. He downplayed the problem, said it wasn't so bad, but once, out of her hearing when he coughed so hard he wasn't certain he was ever going to catch his breath, he became frightened.

He took codeine for his cough and eased himself through the rest of the day and night. He planned to perform surgery the next morning, one of the few operations he'd scheduled in recent weeks, and he intended to go through with it. The patient was a sixty-year-old woman, the wife of another patient of his. She had a malignant tumor in her right lung, precisely where his own primary tumor was located.

The operating room was his arena, center stage, the place that demanded his utmost skill, judgment, and intelligence. In a real sense it helped define him. The OR also demanded total concentration. It was a private, insular world that shut out all concerns about himself. That would be helpful. He would be assisted this morning by two young physicians, Dr. John Walsh, a thoracic-surgery fellow and experienced surgeon in his own right, and Dr. Richard Coin, a younger surgical resident.

John Walsh, the son of a surgeon from Albany, New York, had come to GW in 1975 for his surgical residency. Dr. Walsh participated in his first operation in July of 1975. It was with Dr. Adkins, and he remembers it vividly.

Before he went into the operating room that day, other residents had warned him: Be extra careful; don't do anything that'll upset the boss. They didn't want some rookie's mistake to put him in a bad mood. At one time or another, they all had recognized the classic sign of the boss's displeasure in the OR: His green surgical pants would begin to slip down. No one knew why and no one ever had the nerve to ask, but when the pants slipped, every surgical resident knew that somebody was in deep trouble. He'd stare hard at the offender over his surgical mask, mutter a few oaths, and keep operating. All the while he'd be hitching up his pants with his elbows or yelling for a nurse to put a towel clip on them.

Heeding the warning of his fellow residents, Dr. Walsh went home and studied anatomy textbooks the night before that first operation. There would be no screw-ups, at least not by him.

When the operation got under way the

next morning—it was a relatively simple open-lung biopsy—Dr. Walsh was ordered by Dr. Adkins to cut the intercostal muscles between the ribs with a "bovie," an instrument similar to an electric cautery. Dr. Walsh began but, unaccustomed to the bovie, his hand slipped and the staring tip touched the lung and sizzled, making a small burn mark before he could yank it out.

Dr. Walsh stood in fear.

"The pathology report will just come back with a third-degree burn on the lung," said Dr. Adkins calmly.

Dr. Walsh was relieved.

Dr. Adkins next asked him to prepare the surgical staple gun, an automatic instrument that cuts and mends tissue.

Dr. Walsh had never held a surgical staple gun in his life until the nurse handed this one to him. He didn't know the safety catch was off. He brushed the trigger ever so slightly. Hundreds of staples shot into the operating room, hitting nearly everything, including the open chest cavity of the patient.

Dr. Walsh felt like a man waiting for his execution. Nothing happened this time, either. He couldn't believe it. The boss's pants hadn't slipped; not one harsh word had been spoken.

Dr. Adkins simply asked the nurse for a pair of surgical tweezers and calmly began plucking the staples from the patient's chest cavity.

Dr. Adkins asked Dr. Walsh to reload the staple gun. (That was the way he taught: They learn from mistakes.) Dr. Walsh reloaded it and Dr. Adkins told him just to hold it—he would do everything else.

"Yes, doctor," Dr. Walsh answered.

Dr. Adkins then directed Dr. Walsh to aim the staple gun at a precise spot in the open chest cavity. Dr. Walsh obeyed. Dr. Adkins said Dr. Walsh was to release the trigger when Dr. Adkins pulled his hand away. Dr. Walsh said he understood. When Dr. Adkins began removing his hand John Walsh released the trigger. Dr. Adkins's finger got caught in the gun's trigger mechanism. It hurt a lot.

He jumped. He screamed. He swore. His pants began to slip. The scrub nurse ran behind him as he hopped around the OR. She told him he'd have to change his surgical gloves now that they'd been torn.

"He's almost crushed the goddamn finger!" Dr. Adkins bellowed.

John Walsh, frozen with fear, could only watch as the operation was completed. The patient recovered. It was a while before the boss spoke a civil word to his new resident.

But over the years John Walsh had measured up. Dedicated, intelligent, kind to patients—he was the type of young doctor Paul Adkins liked.

Now, five years later, John Walsh had plenty of thoracic-surgery experience under his belt. Dr. Adkins, although his surgical skills were undiminished, was exhausted and out of breath.

Walsh noticed how labored his breathing was and considered saying that he could take over. He thought better of it, however, and Dr. Adkins persisted, more slowly than usual but carefully and completely and with excellent results for the patient.

Dr. Adkins later visited the patient in her room and told her the good news: Pathology had reported no lymph-node involvement. Her prognosis was excellent, he said. He was happy for her.

His shortness of breath grew progressively worse that day. By the afternoon it was difficult for him to walk across a room without being out of breath. Specialists at GW suggested that he admit himself as a patient. He called Charlie Thompson, who rushed over to the hospital to examine him.

Hundreds of staples shot into the operating room, hitting nearly everything, including the open chest cavity of the patient.

"For God's sake, Charlie," Dr. Adkins pleaded, "don't put me in the hospital." He feared that once in the hospital he would not come out alive. He'd seen it happen far too often to other people.

Dr. Thompson faced a dilemma because at least one specialist said it would be "atrocious" medicine not to admit Dr. Adkins. The specialist argued it was too early for radiation pneumonitis to hit, that it could well be something else and they had bener find out.

Finally, after his examination of Dr. Adkins convinced him that the shortness of breath was probably caused by the pneumonitis dating back to the early reaction in early April, Dr. Thompson prescribed cortisone and walked Dr. Adkins to the hospital pharmacy and watched him take a large dose of it.

Charlie Thompson went home to a restless evening of second-guessing. He was fearful that he might have been wrong, that the shortness of breath was caused by something else, that it would grow more acute, that he might lose his patient. But that night at 8 o'clock Dr. Adkins called and said he was feeling much better. The cortisone had eased the breathing problem considerably.

The shortness of breath improved but did not disappear. Dr. Adkins brought an oxygen tank home and in the morning before he came to the hospital he would inhale a combination of pure oxygen and a bronchio dilator mist to open up the passageways in his lungs. He repeated this process at the hospital at midday and again at home each night. It helped.

On July 11 he had another chest X-ray—he had them at regular intervals—which showed the pneumonitis had cleared up.

When Dr. David Rockoff read the latest X-ray he saw the implications immediately. The fact that the shortness of breath remained even though the pneumonitis was clearing meant that the lung capacity had diminished further and that the main stem bronchi, now squeezed even smaller, were causing problems. Nothing could be done for that. The cancer was galloping.

After consulting with Dr. Thompson, he decided to withhold these findings from Dr. Adkins. If Dr. Adkins realized he was slipping toward pulmonary failure he would know his time was almost up.

Dr. Rockoff now began to wonder if his Labor Day timetable had been too optimistic.

Dr. Adkins realized something was amiss, that he should have been over the pneumonitis by now. But the confusion between illness caused by the cancer and illness caused by his treatment was understandable. To keep his hopes alive—not for a long life but for a few more weeks or months—he wanted to believe his shortness of breath was associated more with his treatment than with his disease. As his expectations diminished, increment by increment, that was all he could hope for now.

During lunch at the hospital cafeteria with Bud Gusack, an internist interested in pulmonary medicine, Dr. Adkins asked him how long he'd seen patients with radiation pneumonitis last.

Dr. Gusack, who knew why his friend was asking the question, told him he knew of cases where they lingered for weeks, even months. When they left the GW cafeteria that day Dr. Adkins apologized for walking so slowly. But it was the only way he could move and still keep his breath. He finally quit smoking entirely—through the spring and summer he had been sneaking a puff here and there. Now he needed every last bit of air he could get into his lungs.

There were days during July when, except for the shortness of breath, he felt reasonably well. July 18 was such a day. He had been asked by a colleague to look at a patient, a middle-aged woman recently operated on for a brain tumor.

After the tumor was removed and examined by pathology it was discovered to be metastatic, with the lung as its source.

Paul Adkins wanted to be a doctor for a while, not a patient, and he quickly agreed to the colleague's request.

Dressed in a dark suit, blue shirt, red paisley tie, and his white physician's coat, he entered the woman's room in the neurological ward. She was lying in bed, surrounded by flowers. There was a jagged red surgical scar down one side of her head. Her husband, a small, self-effacing man, was sitting in a chair next to her bed.

Dr. Adkins sat in a corner of the room and spoke to her in a soft voice. He told the woman that he was a chest surgeon and that he had been asked to look into her case because the primary tumor was located in her lung, in the right upper lobe.

She interrupted him and began to cry. "The smoking," she said, "I always smoked too much. Why didn't I quit?" Then she began to sob. But she stopped abruptly and apologized.

Dr. Adkins explained that they would be doing some tests on her.

She burst out again, her speech weepy and slurred: "I just want to see my kids graduate next June. I don't care what you do. I don't care if my hair turns white. . . ."

Her husband soothed her and she calmed down again.

"We have to get to the bottom of this," Dr. Adkins said. "We want to get some sputum to find out if there are any abnormal cells."

She agreed. Anything, she said, anything. Then she erupted again, screaming about a doctor, not her primary doctor but some young doctor, who'd come in and told her that she'd be in the hospital all summer and that nobody knew what would happen to her.

Dr. Adkins walked over to her bed. He reached out to touch her ankle and gently squeezed it. "I can't speak for or defend everyone in my profession," he said softly. "I'll tell your doctor about the complaint." He said good-bye and walked out to the nurses' station to examine her chart.

Her husband followed and asked Dr. Adkins about the patient's prognosis. Dr. Adkins told him that a cure was unusual but that some people lived with the disease for a long time. This was the hope he harbored for himself.

"My wife is distraught," the husband said.

"I don't blame her," Dr. Adkins answered. He'd read in the chart that the woman's chest had been X-rayed just six weeks earlier in a doctor's private office and that nothing had been found.

"A lot of doctors in private practice put X-ray machines in their offices to make money," he said later to a friend, "but they can't read the X-rays and they miss things."

Dr. Adkins walked back toward his office knowing full well that no matter what treatments the woman underwent, she would never see her children graduate the following June. Four to six months was his best estimate.

He phoned the woman's physician and told him of her complaint about a young doctor frightening her. Doctors who talked to patients like that were professional crepe-hangers, he said to a friend later, and he considered their attitude not only rude but unethical. He'd called a few of them on it. Hard.

Later that afternoon he went to radiation therapy for spot treatment of his lip metastasis, which was shrinking. He also

"For God's sake, Charlie," Dr. Adkins pleaded, "don't put me in the hospital."

received another of his three weekly shots of thymosin. That weekend he went out for nine holes of golf at Burning Tree.

He called it his Rubicon, and soon he would have to decide whether to cross it—whether or not to take chemotherapy. Toward the end of July he went to see Charlie Thompson. The time was quickly approaching when not to decide was to decide.

They had grown ever closer. They spoke daily and saw each other a few times a week. Besides his wife Dr. Adkins felt Dr. Thompson was most responsible for sustaining him during his illness. Dr. Thompson now asked if Dr. Adkins had come to grips with the chemotherapy decision.

He said he was leaning toward chemotherapy and asked what Dr. Thompson would do if he faced the same decision.

Dr. Thompson said he'd take a chance on the chemotherapy. Without it, there was none. You're used to taking chances, he told Dr. Adkins.

He meant that Dr. Adkins had taken several professional risks. For one thing, he'd performed the first coronary bypass operation in Washington several years earlier, only to abandon heart surgery in the mid-1970s amid an internal battle at GW.

Dr. Adkins was still agonizing over the chemotherapy decision as they walked from Dr. Thompson's office to his examining room.

Dr. Adkins's chest seemed remarkably clear to Dr. Thompson and his cranial nerves appeared intact. No sign of a brain tumor. His weight was holding at 150.

Dr. Adkins said his back was still hurting and that he often had to get up in the middle of the night to take a hot bath to relieve the aching. Dr. Thompson palpated the lymph nodes and good-naturedly scolded Dr. Adkins for feeling them himself. "It's my job," he said.

They went back to his office and Dr. Thompson passed him a box of Russell Stover chocolates; he wanted to get calories into him. They chatted easily about the weather and the Republican Convention, and then Dr. Adkins moved to leave.

"Paul," Charlie Thompson said as they were parting, "you've got a chance. Don't forget."

"I'm not throwing in the sponge."

"You're damn right you're not. I'm not going to let you."

If the chemotherapy didn't go well, if the side effects were more severe than anticipated, Dr. Thompson said, "I'll buy us a case of whiskey and we'll just forget about it."

Dr. Adkins's 55th birthday was July 21, a Monday. A party was held the following Friday.

His shortness of breath slowly grew worse. He would feel good one day and bad the next, but he would never feel as good on his best day one week as he had on his best day the week before.

The coming birthday stirred conflicting emotions. He knew it would be his last and he knew he would begin chemotherapy on July 28. He had finally decided to have it because he thought that it might extend his life and that a metastasis in the brain could be just as debilitating as chemotherapy. But his decision gnawed at him that week. In addition, he felt a small growth inside his mouth and thought it was a tumor. It turned out not to be, but it preyed on his mind. His nausea continued and his esophagitis flared up and his back pain continued to worsen. He hadn't had a full night's sleep in weeks.

His secretary, Cindy Fisk, called him Friday morning to remind him he had a CT scan of his chest scheduled that afternoon. He usually remembered everything, but lately he had been forgetting things, and he had forgotten the appointment.

She asked whether, in light of everything, he wanted to cancel the birthday party. "No!" he yelled. It was his body and he was damn well going to do with it what he wanted.

Two hours before the party he had the CT scan. Dr. Rockoff saw that his left main stem bronchus was now only three

millimeters wide. Its normal width was ten millimeters. The right one was down to six millimeters. Not enough air was getting into the lungs, which themselves were losing function. Dr. Rockoff had hoped the bronchus to the right lung would provide sufficient air flow, but the tumor was surrounding and strangling it—impeding not only air flow but also proper oxygenation of the blood. Cerebral anoxia—lack of oxygen in the brain—was the reason he had begun to forget things. Dr. Adkins gave no indication that he wanted to know what the CT scan revealed. Dr. Rockoff lied to him, said the situation was unchanged.

Old friends, residents, nurses, fellow doctors—more than 100 persons—came to the birthday party, one from Morgantown, West Virginia.

Dr. Adkins sat quietly for a long time, trying to get into the mood of the party. People came up to talk with him and at first he was polite but not very responsive. But slowly, as the warmth enveloped him, as he saw the genuine outpouring of affection and love, he began to respond. He was deeply moved by it all.

They presented him with a number of books, novels and other light reading, and then Dr. Vincent Iovine, a retired surgeon and old friend, stood up to speak. He thanked Dr. Adkins for everything he had done for all of them. Dr. Adkins stood and told them he was happy for everything they had done together.

Dr. Thompson drove him home after the party. On the way they talked about Faith Adkins, how she was holding up, how she would do when he was gone. Dr. Adkins knew time was closing in on him, knew without being told that his lungs were slowly shutting down.

When they arrived home, Dr. Thompson came in with him and the two of them and Mrs. Adkins talked in the den. Monday would be the day of chemotherapy. Dr. Adkins reached into his pocket and handed his wife a card. It was for a wig shop. He'd done some research, he said, and this was the best place around. It was only partly a joke, Dr. Thompson realized. His patient still had a healthy vanity.

Dr. Thompson rose to leave. He hugged Faith Adkins and said that the three of them had to stick together because they were all in it together. Then he left.

On Sunday, the day before his chemotherapy, Dr. Adkins played nine holes of golf. That night he watched television and drank five light beers. He had to hydrate himself, he kidded Dr. Thompson when he called.

Dr. Thompson encouraged him, told him to have a few beers, to play a little golf, to have a good day when he could. You're playing against the house, he said, and the house always wins. But it helps to make a good roll every now and then.

Receiving the chemotherapy, a combination of cis-platinum and vindesine, took seven and a half hours—long, boring, and uncomfortable hours, even though several colleagues came by to visit. Dr. Adkins sat in a lounge chair in the hematology section of the Burns Building as the drugs dripped into him from an IV. He was too restless and uncomfortable to read or sleep. A little before 4 PM he called Dr. Thompson—who had come there at 7:30 AM to make certain every precaution had been taken—to tell him that his back hurt like hell but that he felt no other ill effects from the chemotherapy, which was finished. His wife was picking him up, he said, and he was going home.

Dr. Thompson canceled the reservation for a hospital room he'd made in case of an immediate adverse reaction. He was happy that Dr. Adkins had withstood the treatment so well.

"I'm not throwing in the sponge," Dr. Adkins said. Charlie Thompson replied, "You're damn right you're not. I'm not going to let you."

Dr. Adkins felt well most of Tuesday, but that night, just after dinner, he could not keep any food down.

It continued unabated the next day, and the next. His strength slipped away and it was even difficult for him to hold down liquids. He grew weaker. He found himself unable to get out of a chair without blacking out. His inability to eat or drink, coupled with a side effect of vindesine, was causing dehydration and low blood pressure.

By the following Monday he knew he needed help. His wife drove him to the hospital and he went directly to hematology, where he was put on IVs to be rehydrated. Three colleagues, Steve Pett, John Walsh, and Newt Tsangaris, came by and cheered him up. They told jokes while he waited for the IV fluid to drip into him.

By Wednesday, August 6, he was rehydrated, and he bounced back a bit. Although he was still very weak, the acute dizzy spells had passed and he was once more able to go to the office and do some administrative work, answer letters, talk on the phone. He still insisted on coming to work. Someone called and asked how he was doing. "Not too bad," he answered, "except they're trying to kill me with the chemotherapy."

His back was now so painful that at least twice a night he had to take baths, which provided some relief. He rubbed on Ben Gay and his wife continued to massage him at night.

His breathlessness was growing worse and he was coming to the conclusion that he would not take the full treatment of chemotherapy again. He took only weekly shots of vindesine, and he was very close to ending those. He remained understandably confused over what was making him feel so terrible—the chemotherapy or his lung cancer. He knew it was probably a combination of the two, but he wasn't sure which one was the larger problem right now.

His weight dropped further and he found himself unable to fit into any clothes except old golfing slacks and sports shirts, but he still went to his office. He experienced no hair loss. It would take two or three full doses of the chemotherapy for that to happen.

A new complication now developed: pericarditis. An inflammation of the sac around the heart, it was thought to contribute to the dizziness he was experiencing when he stood up quickly. His doctors believed the cause of the pericarditis was either radiation or a metastasis.

He considered the new complication an incidental finding and showed no interest in indentifying its cause.

Speaking to a friend in early August, he said he sensed things were drawing to a close. He said he had no regrets. His life had been fulfilling, and he'd accomplished more than he'd thought he would. He should have spent more time with his family, but medicine has a way of keeping you working long hours. He was proud of his work to reform exams for the American Board of Thoracic Surgery and of his teaching at GW, and the way he'd built up the surgical department there. He'd miss seeing grandchildren and retirement. When he became too much of a burden at home he'd admit himself to the hospital, he said.

He hadn't embraced death as a release yet, but he was resigned to the fact that it was coming soon. He didn't know when and he didn't want to know. Depression, anger, and frustration were all still there inside him, but they were not dominant emotions any longer. He was closer to finding peace.

He got up one morning in early August and the shortness of breath, the back pain, the dizziness, the weakness, and lingering nausea were all worse. He told his wife: "Every major body system I own is screwed up." He faced a di-

lemma: He didn't eat because he was afraid of the nausea but the lack of nutrition made him weaker.

He kept going to work. Mrs. Adkins had to drive him there. "When you stop caring, it's all over," he said.

On Thursday evening, August 7, his eldest son, David, came to visit, as he often had recently. They spoke about many things, including work and golf.

The reprints of his Atlanta speech had just arrived and Dr. Adkins signed one "with love" for David, who said goodbye that night buoyed by the impression that his father was in good spirits.

Chest X-rays that week showed a further loss of lung volume and indicated that his lungs were now taking in more air than they could exhale, a condition similar to emphysema.

Old friends drove from Richmond the weekend of August 9-10 to visit him and his wife. "I guess they want to see how bad I look," he joked to a telephone caller. He knew they would politely say the opposite.

Other friends came over to the house that Saturday, and they all planned to go out to dinner at Kenwood Country Club. But Dr. Adkins had to spend much of the day in bed and he didn't have the strength to go to dinner that evening. He told his wife he couldn't believe how fast he was sinking.

On Sunday night, lying flat in bed, he became short of breath, the first time he'd experienced that while in bed. He knew he wasn't going to get that one last good summer.

On the afternoon of Monday, August 11, after working in his office briefly, he went for radiation treatment of his lip. He had to steady himself against walls or rails as he walked.

At the radiation-therapy office he knew he could go on his own no longer. He called Dr. Thompson and said he couldn't manage at home anymore, that there was no sense in going there. He'd already told Faith, he said.

Faith Adkins called Dr. Thompson from her home a short while later. She knew her husband's decline was rapid, she knew he wouldn't want to go into the hospital unless he felt he was at the edge. Was he in danger? she asked.

Dr. Thompson said, "Knowing what he has, I'd have to say yes. "Let's play it day by day, Faith. That's all we can do."

Dr. Adkins waited in a wheelchair near radiation therapy and when a young resident came by and offered him oxygen to assist his labored breathing he refused it. He didn't want people to see him like that, not here.

Dr. Thompson arrived at 2:30 PM. When their eyes met, Dr. Adkins gave him the thumbs-down sign. His face reflected sadness and defeat. Dr. Thompson cut through the red tape and got Dr. Adkins a private room in the thoracic-surgery suite on the sixth floor. Dr. Adkins was officially admitted, at 4:30 PM, on the floor he'd run for ten years.

Everybody who had worked with him in the thoracic-surgery suite wanted him there now that he had been admitted to the hospital, wanted to be near him, to take care of him.

Shortly after Dr. Adkins was admitted, Dr. Richard Coin, the young resident who had assisted him in his last surgical procedure, came by to take some blood for blood-gas readings. Dr. Adkins said he wanted oxygen. Now.

Dr. Coin said the blood should be drawn while Dr. Adkins was breathing room air. To hell with the blood gases, he gasped, give me the oxygen. This was the chairman of surgery talking. Dr. Coin brought the oxygen.

He hadn't embraced death as a release yet, but he was resigned to the fact that it was coming soon.

The blood sample was taken afterward. The blood-gas readings came back early that evening, and they were not encouraging. Dr. Thompson had hoped they would indicate that Dr. Adkins was dehydrated—because dehydration could explain his increasing shortness of breath and weakness. But the blood-gas results weren't bad, and that could mean only that the lungs were.

More chest X-rays were taken, and Dr. Thompson, Dr. Rockoff, Dr. Walsh, and Dr. Allan Ross, the head of cardiology, met in Rockoff's office to discuss them. Dr. Rockoff had the last six X-rays arranged in sequence. He pointed out that in the last week the heart had enlarged by a few more millimeters as a result of the pericarditis and, more important, that there was now a fluid buildup in the upper part of the right lung and more air had been trapped in both lungs. The situation was growing critical.

Dr. Ross said another heart echogram was needed to determine the present extent of the pericarditis. There was a fear of tamponade, a condition in which the fluid buildup in the pericardium becomes so acute that the heart is squeezed. Tamponade would cause a cardiac crisis Dr. Adkins would not be able to withstand.

Dr. Thompson agreed to the heart echogram but insisted that he be kept in-

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formed every step of the way.

"Charlie," Dr. Ross said, "I'll call you the minute I know anything."

The oxygen helped Dr. Adkins breathe and talk with less difficulty. Visitors came in and out. They found that he still had a sense of humor. "All things considered," he said, "it's a lot better being a doctor than a patient."

After he was given the heart echogram he asked a visitor to see if there was a bathtub in the bathroom. Dr. Adkins was greatly relieved to learn that there was. He still had to take a couple of hot baths every night to relieve the back pain.

Alone with a friend, he began talking philosophically. What is life worth, he asked, when you have to lie down and rest for a half hour to recover from shaving? He said he had no regrets about refusing the radical treatment offered at Sloan Kettering but he did regret undergoing chemotherapy. He should have taken his chances with the radiation and quit all other treatment. The chemotherapy made him feel miserable. It wasn't worth it. "I guess it's the Lord's way to have you go in small pieces like this," he said, "to get you feeling so bad that living is worse than the fear of dying."

Dr. Thompson and Dr. Ross met in the latter's office to study the results of the heart echogram. There had been no major changes from the one taken a week earlier. Dr. Ross, a young man and new to GW, looked at Dr. Thompson with tired eyes and said: "We can tap the pericardium and get the fluid out, but it's just a matter of time, and not much."

Mark Adkins, calling home from New York that Monday night, learned from his brothers Bill and Paul that their father was now in the hospital. He waited until after his mother had returned from visiting before calling his father at the hospital. His father spoke with great difficulty; every breath was labored.

Dr. Adkins told Mark that he was dehydrated again but that the doctors were going to hydrate him and give him some hyperalimentation. He should be better in a couple of days, he said.

Mark, realizing that it was a struggle for his father to talk, kept the conversation brief. He hung up believing what his father had told him—that he'd be a lot better in a couple of days.

That night Dr. Adkins rested upright in bed, tubes feeding him oxygen through his nose, and watched the Democratic National Convention on television.

He did not sleep well.

On Tuesday he was exhausted. A steady stream of visitors came by, but Dr. Adkins, sedated by codeine for his back pain, drifted in and out of sleep much of the day. Mrs. Adkins spent several hours with him. She knew he was fading. She didn't know how long he had.

By Tuesday night, despite the oxygen and the broncho dilators, Dr. Adkins's breathing became more difficult and Dr. Thompson gave him Valium to help him relax and sleep. Dr. Adkins had to sleep sitting up in bed; he couldn't breathe when lying down. Dr. Thompson stayed in his room until midnight, trying to ease his pain.

Late that evening Dr. Adkins struggled to get to the bathroom, and when he returned Dr. Thompson helped him back into bed. Their hands met. Dr. Adkins, the least demonstrative of men, clasped Dr. Thompson's hand tightly and said in a voice that was little more than a gasp: "Charlie, thanks for taking care of me."

Dr. Adkins clasped Dr. Thompson's hand tightly and said, "Charlie, thanks for taking care of me."

At 1 AM Wednesday the time came when his lungs couldn't function well enough to keep his body going. He was suffocating. To compensate for the fact that his lungs could no longer oxygenate the blood properly, his heart began to race, to get oxygen to the deprived tissues.

Dr. Adkins wanted to fight, but he had nothing left to fight with. He didn't want "heroic measures" to be taken after his mind slipped permanently from consciousness. He wouldn't become a vegetable: he had an understanding with Dr. Thompson about that.

Three years earlier Dr. Adkins's surgical mentor, Dr. Brian Blades, his predecessor as chairman of surgery at GW and a close friend of Charlie Thompson, had been kept alive for three days by a respirator after he had a cerebral hemorrhage. Dr. Thompson went into Dr. Blades's room and turned off the respirator switch. A moment later Dr. Adkins walked in and, seeing what Charlie Thompson had done, told him it was the right thing. They both watched as Dr. Blades, then in his seventies and a friend of both of them, died within minutes. Earlier this summer, Dr. Thompson, recalling the decision made on Dr. Blades, said: "When the time comes, Paul knows what I'll do."

Dr. Adkins's breathing had now become more distressed. Dr. Coin, who had gone without sleep for more than twenty hours, was summoned by the night nurse. He saw that Dr. Adkins's system was begging for oxygen. Dr. Coin gave him as pure a mixture of oxygen as possible and offered a number of medical alternatives to keep him going.

"Look," Dr. Adkins gasped, his voice almost a whisper, "I just want to be comfortable."

He was given more tranquilizers.

At 4 AM Dr. Adkins took another turn for the worse. He was now gasping for every breath. Like a drowning man, he was unable to get air. He asked Dr. Coin to take him to the intensive-care unit—like the water's surface, a place where a struggling man might breathe.

Dr. Coin said Dr. Adkins didn't want or need that kind of machinery. Instead, he gave him special treatments to open up the bronchial passages as much as possible.

Dr. Adkins continued to struggle for air.

At about 7 AM Dr. Thompson arrived. Dr. Adkins's heartbeats were now at 160 or more a minute, more than twice as fast as normal. He was still gasping. Dr. Thompson knew the end was near, and he knew Dr. Adkins knew it. They had said their good-byes the night before.

Dr. Thompson gave him Demerol to help him rest and at 9:30 that morning left for his office, where his waiting room was filled with patients. He hadn't been there long when he was called by the floor nurse, who said Dr. Adkins needed to see him. Dr. Thompson asked his receptionist to tell his patients to go home and then hurried over to the hospital.

Now unable to speak except in gasps, Dr. Adkins asked Dr. Thompson about the intensive-care unit. Should he go there? It was the survival instinct talking.

"No, Paul," Dr. Thompson said. "I don't want you to go over there and have them stick in a bunch of tubes."

Dr. Adkins nodded. He understood. He whispered his thanks.

Dr. Thompson asked if Dr. Adkins wanted a priest and he nodded yes. Dr. Thompson summoned one from St. Stephen's, which was nearby.

Then Charlie Thompson spoke his final words to his friend and patient, the man he'd cared for all these months: "Paul, I'm going to give you some rest."

Dr. Adkins nodded his approval a final time.

Dr. Thompson gave him Demerol again, and Dr. Adkins slipped into a deep sleep.

Mrs. Adkins had arrived and soon began calling her sons to tell them to come to the hospital. Mark could not be reached in New York right away. A message was left for him.

A priest, an elderly man who walked with a limp, arrived and administered the last rites of the Catholic Church.

At 11:15 AM Dr. Thompson switched from Demerol to morphine, a stronger depressant, which slowed down Dr. Adkins's respiration rate markedly. Dr. Thompson gave him morphine again at 12:30 PM. One of Dr. Thompson's former residents came by and observed what was happening. He put his hand on Dr. Thompson's shoulder and told him he was doing the right thing.

All morning doctors and nurses had kept coming up to the room, gathering around, many weeping. Mrs. Adkins remained at his bedside, weeping at times but also strong. She had never expected it to come this quickly, she said.

Early in the afternoon Bud Gusack came and stood by the bed. The oxygen tubes had been removed earlier, and Dr. Adkins, still propped up, was breathing very slowly. Faith Adkins looked up and spoke: "You know, Buddy, he gave me his heart and his whole life and he asked so little of anybody else." They both wept.

Three of his sons had joined the vigil. David and Bill sat quietly, watching their father with solemn faces. Paul was at his father's side, holding his hand.

Mark Adkins heard himself being paged at Bellevue Hospital at approximately 2:15 PM. He wasn't alarmed. He was on call and it was routine to be paged

He walked into the surgery office for his message. The secretary said a Dr. Tsangaris from GW Hospital had called. Mark realized what it was about and called back immediately. Dr. Tsangaris's voice was heavy. He told Mark his father was having respiratory difficulty.

"How bad?" Mark asked.

"He's having a very difficult time," Dr. Tsangaris said.

Then Mark asked whether Dr. Adkins had been put on a respirator, and was told he hadn't been.

Mark agreed with the decision and said he would get there as quickly as he could.

Dr. Walsh, who had come up several times earlier to look in on Dr. Adkins, reappeared in the early afternoon, his eyes reddened. He was due in surgery but said he wasn't up to it. He said he couldn't bring himself to operate when Dr. Adkins, the man who had trained him and whom he adored, was dying. Dr. Thompson, weeping, said it was his duty. Dr. Walsh left for the operating room.

Dr. Adkins had received fifteen milligrams of morphine approximately every hour. Dr. Thompson administered it each time because he wanted no one else to bear any responsibility.

Dr. Adkins's heart was strong. It continued to race to make up for the failing lung functions. But it would have to give out soon.

At 4:05 PM Dr. Thompson gave him another fifteen milligrams of morphine.

Mark Adkins still had not arrived. David, Paul, and Bill remained at their father's side. So did Mrs. Adkins, joined by her younger brother, Jon Jouvenal. Dr. Thompson told them it was almost over.

"I'm not Marcus Welby," he said. "I can't predict when. It could be ten hours, but I don't think it will be that long."

Dr. Adkins had not been conscious since 11 AM. He was in coma. At 4:25 PM Mrs. Adkins let out a soft cry. Her husband had stopped breathing. Several doctors standing outside rushed in.

Dr. Thompson pronounced Paul Adkins dead at 4:30 PM, precisely 48 hours after he was admitted to the hospital. His death came four months and eleven days after he saw the first X-ray and knew that he was looking at his own obituary.

Mark Adkins caught the 4 o'clock shuttle in New York and landed at National at 5 PM. He raced from the terminal to the subway and got off at the Foggy Bottom stop. He ran up the steps of the long escalator. As he approached the top he had a full view of the front of GW Hospital. The flag at the entrance was at half-mast.

Charlie Thompson did not sleep well that night. Should he have done more to keep Dr. Adkins alive a while longer? He agonized until the next morning, when the autopsy was held.

Even in death Dr. Adkins had wanted to teach. They would learn from his body.

In the morgue on Thursday morning Dr. Thompson immediately recognized the high arches of Dr. Adkins's feet. He covered them with the sheet. He watched the autopsy with Dr. Walsh, who attended as a final gesture of respect.

The amount of cancer that had invaded the body was staggering to them. Both lungs were heavily infiltrated, even more dramatically than the X-rays had indicated. So were the kidneys, the adrenal gland, and the liver. The pericardium around the heart was also invaded. The heart itself had been invaded, and so had the spine, and so had the cracked rib, the cause of his back pain.

Dr. Thompson now knew that no more could have been done, that administering the morphine had been the only humane course open to him, that the fact Paul Adkins lived as long as he did was a testament to his tenacity and fierce will.

That night Charlie Thompson slept.

The wake was held at the Pumphrey Funeral Home in Bethesda. Scores of people came: doctors, old patients, friends, neighbors. In the crowd a man looked at the flag-draped casket and wept. Where is Dr. Adkins's wife? he asked. Where are his sons? He had to tell them something. He had to tell them what a great man this was, this man who had saved his life, who had put a pacemaker in him thirteen years ago.

He walked over to Bill Adkins, only eighteen, but looking older in his dark three-piece suit. The man told him all the things his father had done for him. Then he found Faith Adkins and told her too. She reached over and hugged him, and gently kissed him, and the man left.

The funeral was held at Little Flower Catholic Church on Saturday, August 16. Dr. Adkins had asked his wife during the summer not to forget the passage in William Cullen Bryant's poem "Thanatopsis" when he died. He wanted it read at his funeral.

So live, that when thy summons comes . . .
Thou go not, like the quarry-slave at night,
Scourged to his dungeon, but, sustained and soothed
By an unfaltering trust, approach thy grave,
Like one that wraps the drapery of his couch
About him, and lies down to pleasant dreams. □

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